



National Ice Center
Antarctic Sea Ice Atlas
1997

19990722 021



National Ice Center
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<http://www.natice.noaa.gov>

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PREFACE

The National Ice Center (NIC), under sponsorship of the United States Navy, the United States Coast Guard, and the National Oceanic and Atmospheric Administration (NOAA), provides sea ice analyses encompassing the "Arctic" and the "Antarctic". These analyses continue the data set established under our previous name, the Joint Ice Center. These atlases continue the near real-time integration of remotely sensed data and point observations and differ only in that the Arctic and Antarctic are split into two separate publications per hemisphere per year.

This publication is the 12th edition of the annual "Antarctic Sea Ice Atlas" published in hard copy format by the NIC. The atlas contains weekly charts depicting the sea ice extent and coverage in the Southern Hemisphere from the first week of January through October 1997. During the last week of October 1997, the Antarctic paper charts were replaced by digital charts in a Graphics Interface Format (*.GIF). Printouts of the digital GIF charts for all Antarctic regions are contained in Supplement I to the "Antarctic Sea Ice Atlas". Future annual atlases will be available in a digital format on CD-ROM through the National Snow and Ice Data Center (<http://www-nsidc.colorado.edu>). NSIDC is the official archive center for the NIC.

The NIC uses a wide variety of data sources in the production of sea ice analyses. Table 1 lists the data sources used to produce the Antarctic weekly ice analyses contained in this publication. The line types used in the analyses provide metadata information with regard to sensor type. Solid lines depict boundaries derived from: point observations, Defense Meteorological Satellite Program Operational Line Scan (DMSP OLS) and NOAA Advanced Very High-Resolution Radiometer (AVHRR) data. Dash-dash-dotted line depicts boundaries derived from DMSP Special Sensor Microwave Imager (SSM/I), and dashed lines depict boundaries derived from forecast models and climatology.

Please direct questions or comments to the NIC Liaison Branch, at phone number (301) 457-5303 extension 311 or 303, facsimile number (301) 457-5300, or electronic mail address: liaison@natic.noaa.gov

Atlas addendum: This publication is intended to serve as an interim solution, while transitioning to distribution via CD-ROM. The purpose of this atlas is to make all National Ice Center (NIC) sea ice charts available to customers using NIC designated archive centers. By fall 1999, it is anticipated that NIC will complete and distribute Arctic/Antarctic ice atlases on CD-ROM for 1995, 1996, 1997 and 1998. It should be noted that the charts presented in this atlas have been drawn by hand for operational use. Corrections to "hand annotations" are visible on some of the charts in the atlases.

From	To	Sensor Platform	Sensor and Type	Spectral Region	Resolution	Coverage
01-97	12-97	DMSP F-10, 11, 12, 13, 14	OLS Fine: VIS IR SSM/I	0.4 to 1.1 μ m 10.2 to 12.8 μ m 19.35 and 37GHz	0.55 km 25 km	3,012km 3,012km
01-97	12-97	NOAA 12, 14	AVHRR: HRPT/LAC VIS NIR IR	0.58 to 0.68 μ m 0.72 to 1.10 μ m 3.55 to 3.93 μ m	1.1km at nadir; 2.5km at swath edge	4,000km

TABLE 1. 1997 Antarctic Satellite Data Sources

Note: DMSP F-14 launched 04/15/97

Abbreviations and Acronyms:

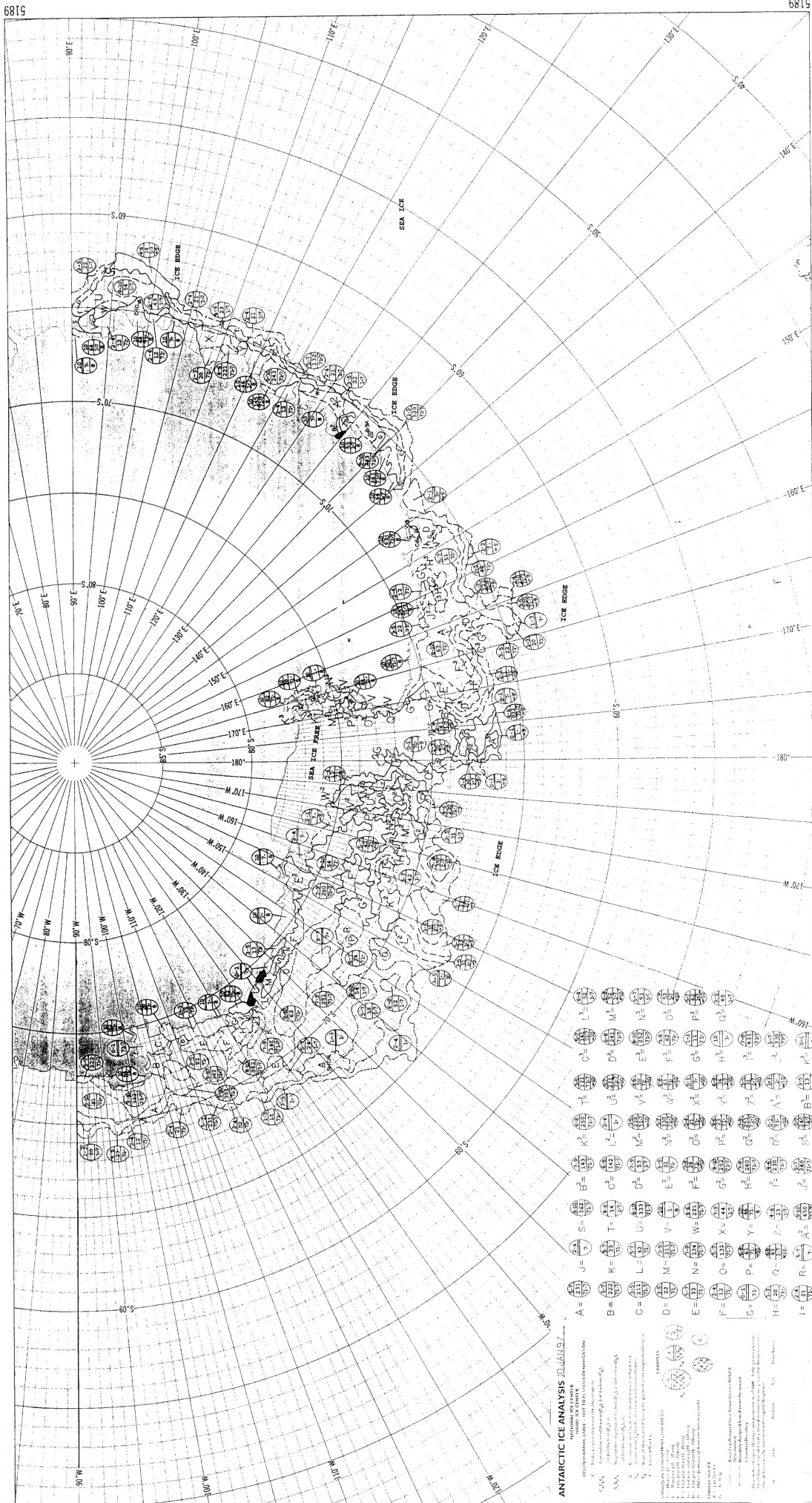
AVHRR- Advanced Very High Resolution Radiometer
cm- centimeter
GHz- GigaHertz
HRPT- High Resolution Picture transmission
IR- Infrared
km- kilometer
LAC- Local Area Coverage
NIR- Near Infrared
OLS- Operational Linescan System
SSM/I- Special Sensor Microwave Imager
 μ m- micrometer
VIS- Visible

Antarctica satellite composite courtesy of United States Geological Survey, Flagstaff, AZ.

(<http://TerraWeb.wr.usgs.gov/TRS/projects/Antarctica/color/images>).

Prepared under the authority of Commander, Naval Oceanography Command, Stennis Space Center, MS 39529-5000





ANTARCTIC ICE ANALYSIS (JAN 97)

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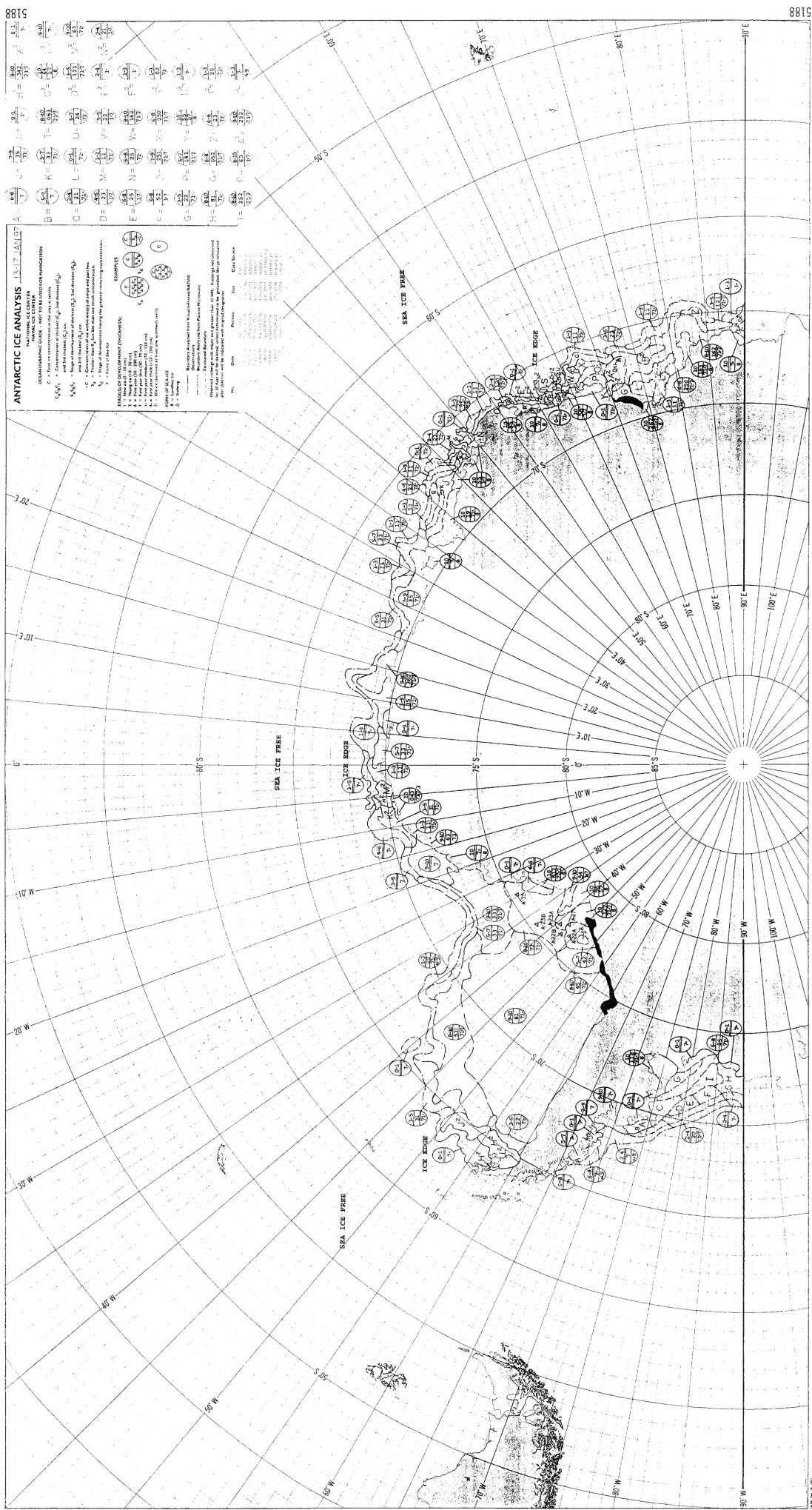
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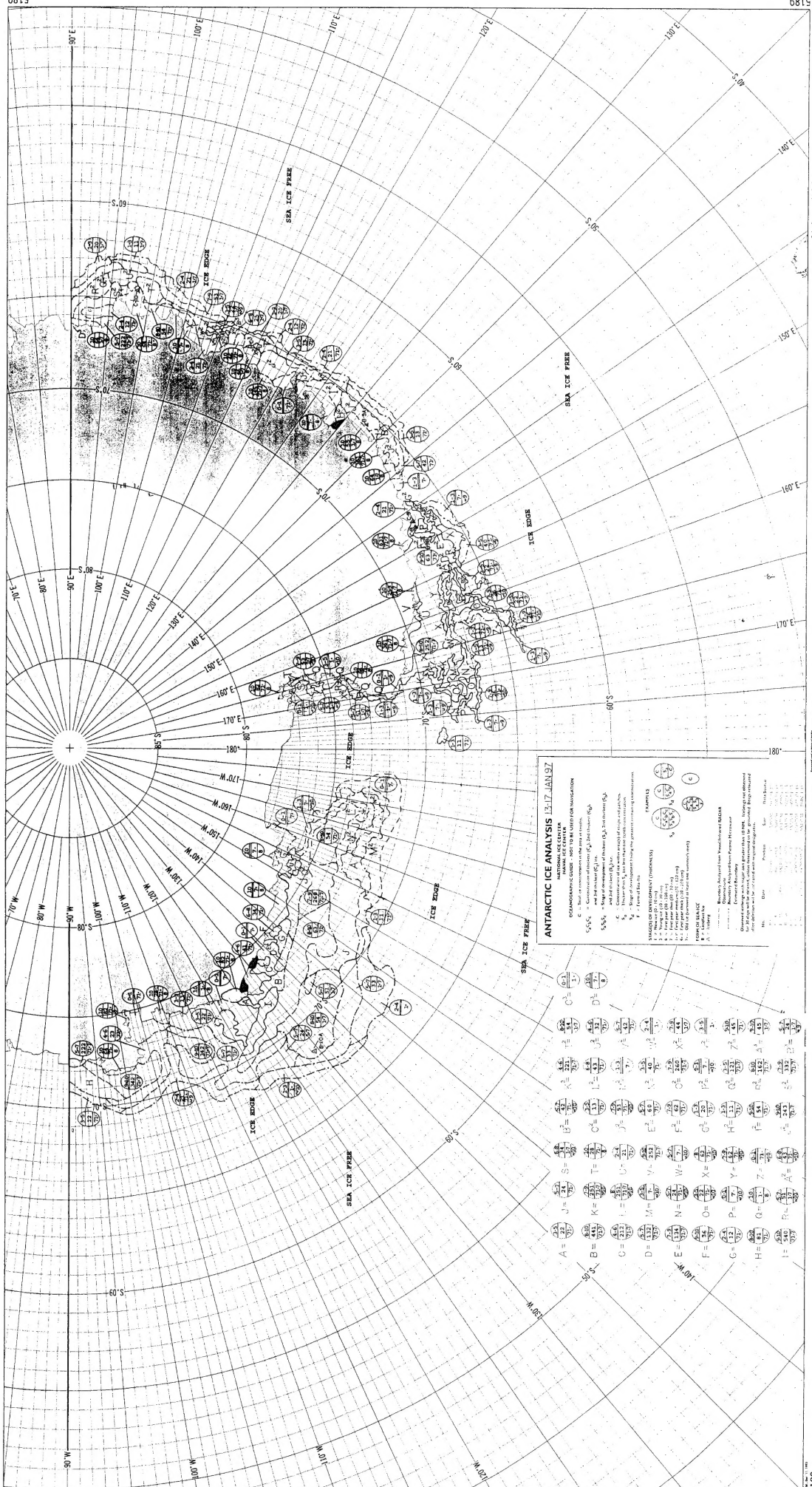
U.S. DEPARTMENT OF COMMERCE

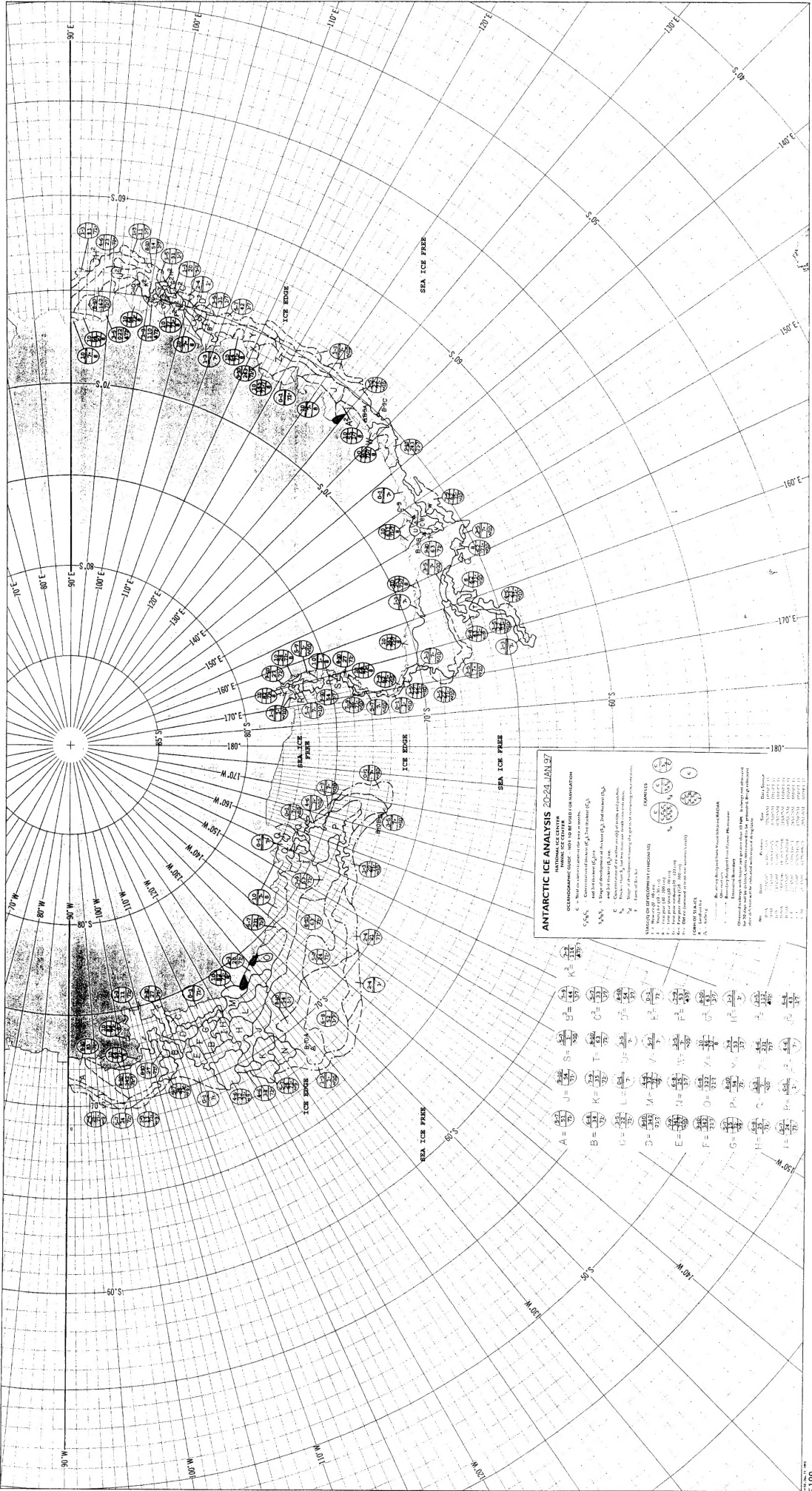
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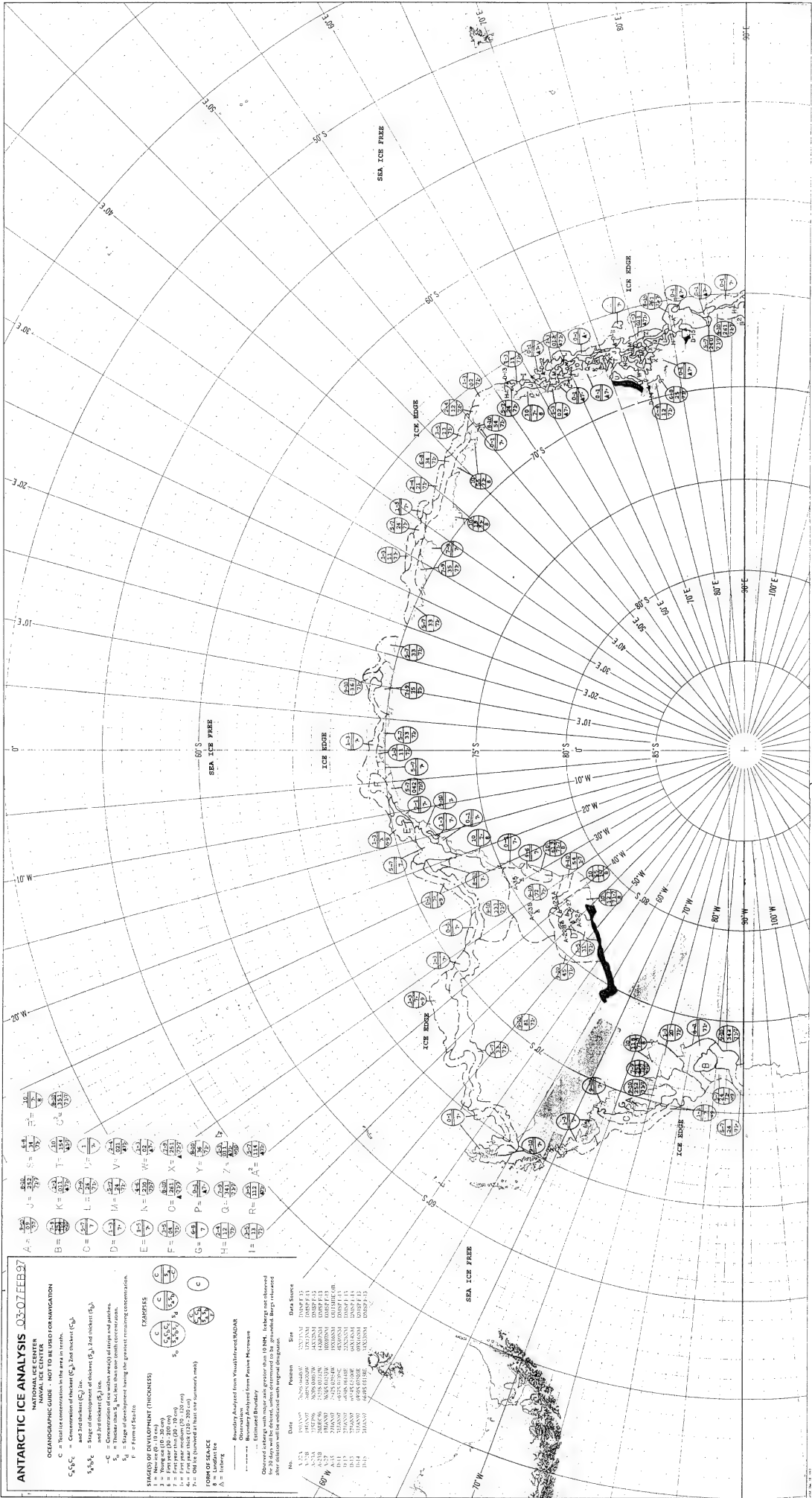
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ANTARCTIC ICE ANALYSIS 03-07 FEB 67

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OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION

Legend:

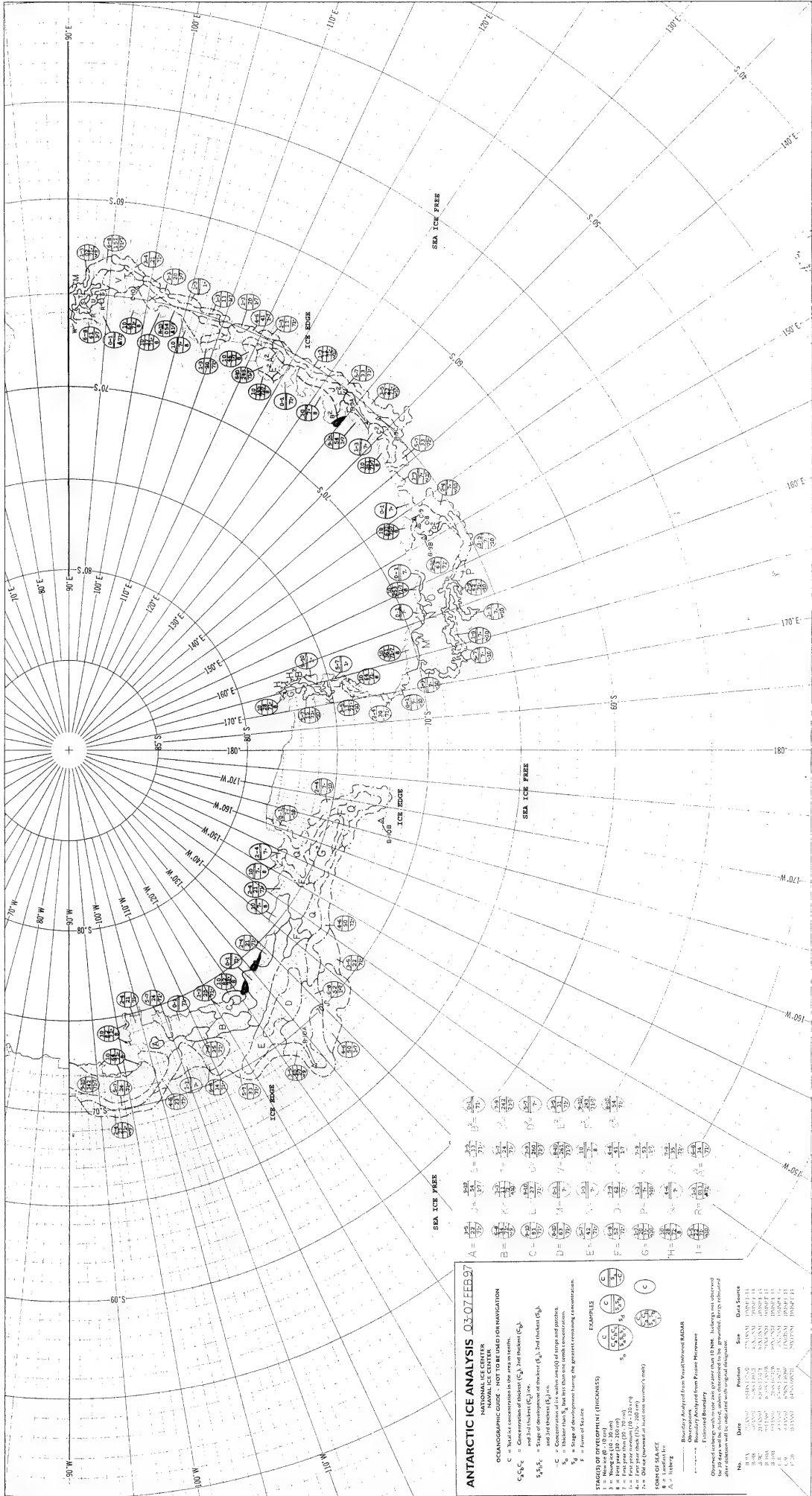
- \bigcirc = Ice edge (containing number)
- \bigcirc = Sea ice free
- \bigcirc = Data point (containing number)

STAGES OF DEVELOPMENT (THICKNESS)

1 = New ice (0 - 15 cm)
2 = First year (15 - 200 cm)
3 = Second year (200 - 300 cm)
4 = Third year (300 - 400 cm)
5 = Fourth year (400 - 500 cm)
6 = Old ice (500 - 600 cm)
7 = Ice of unknown age (600 - 700 cm)
8 = Ice of unknown age (700 - 800 cm)
9 = Ice of unknown age (800 - 900 cm)
10 = Ice of unknown age (900 - 1000 cm)

FORM OF SEAS

A = Iceberg
B = Leading ice
C = Iceberg
D = Iceberg
E = Iceberg
F = Iceberg
G = Iceberg
H = Iceberg
I = Iceberg
J = Iceberg
K = Iceberg
L = Iceberg
M = Iceberg
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AO = Iceberg
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BA = Iceberg
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BY = Iceberg
BZ = Iceberg
CA = Iceberg
CB = Iceberg
CC = Iceberg
CD = Iceberg
CE = Iceberg
CF = Iceberg
CG = Iceberg
CH = Iceberg
CI = Iceberg
CJ = Iceberg
CK = Iceberg
CL = Iceberg
CM = Iceberg
CN = Iceberg
CO = Iceberg
CP = Iceberg
CQ = Iceberg
CR = Iceberg
CS = Iceberg
CT = Iceberg
CU = Iceberg
CV = Iceberg
CW = Iceberg
CX = Iceberg
CY = Iceberg
CZ = Iceberg
DA = Iceberg
DB = Iceberg
DC = Iceberg
DD = Iceberg
DE = Iceberg
DF = Iceberg
DG = Iceberg
DH = Iceberg
DI = Iceberg
DJ = Iceberg
DK = Iceberg
DL = Iceberg
DM = Iceberg
DN = Iceberg
DO = Iceberg
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DR = Iceberg
DS = Iceberg
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DU = Iceberg
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DW = Iceberg
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EC = Iceberg
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EL = Iceberg
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EQ = Iceberg
ER = Iceberg
ES = Iceberg
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EU = Iceberg
EV = Iceberg
EW = Iceberg
EX = Iceberg
EY = Iceberg
EZ = Iceberg
FA = Iceberg
FB = Iceberg
FC = Iceberg
FD = Iceberg
FE = Iceberg
FF = Iceberg
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FH = Iceberg
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NX = Iceberg
NY = Iceberg
NZ = Iceberg
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OF = Iceberg
OG = Iceberg
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OI = Iceberg
OJ = Iceberg
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ZY = Iceberg
ZZ = Iceberg



ANTARCTIC ICE ANALYSIS 03-07 FEB 97

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NAVAL ICE CENTER

OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION

C = Total ice concentration in the area in tenths.

C_1, C_2, C_3 = Concentration of distinct C_1 , C_2 and distinct C_3 .

S_1, S_2, S_3 = Stage of development of the first C_1 , C_2 and distinct C_3 .

C_1, C_2, C_3 = Concentration of ice within radius of stage and position.

S_1, S_2, S_3 = Stage of development of the first C_1 , C_2 and distinct C_3 .

P = Form of ice.

P_1, P_2, P_3 = Form of ice.

P_1, P_2, P_3 = Form of ice.

P_1, P_2, P_3 = Form of ice.

P_1, P_2, P_3 = Form of ice.

P_1, P_2, P_3 = Form of ice.

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P_1, P_2, P_3 = Form of ice.

P_1, P_2, P_3 = Form of ice.

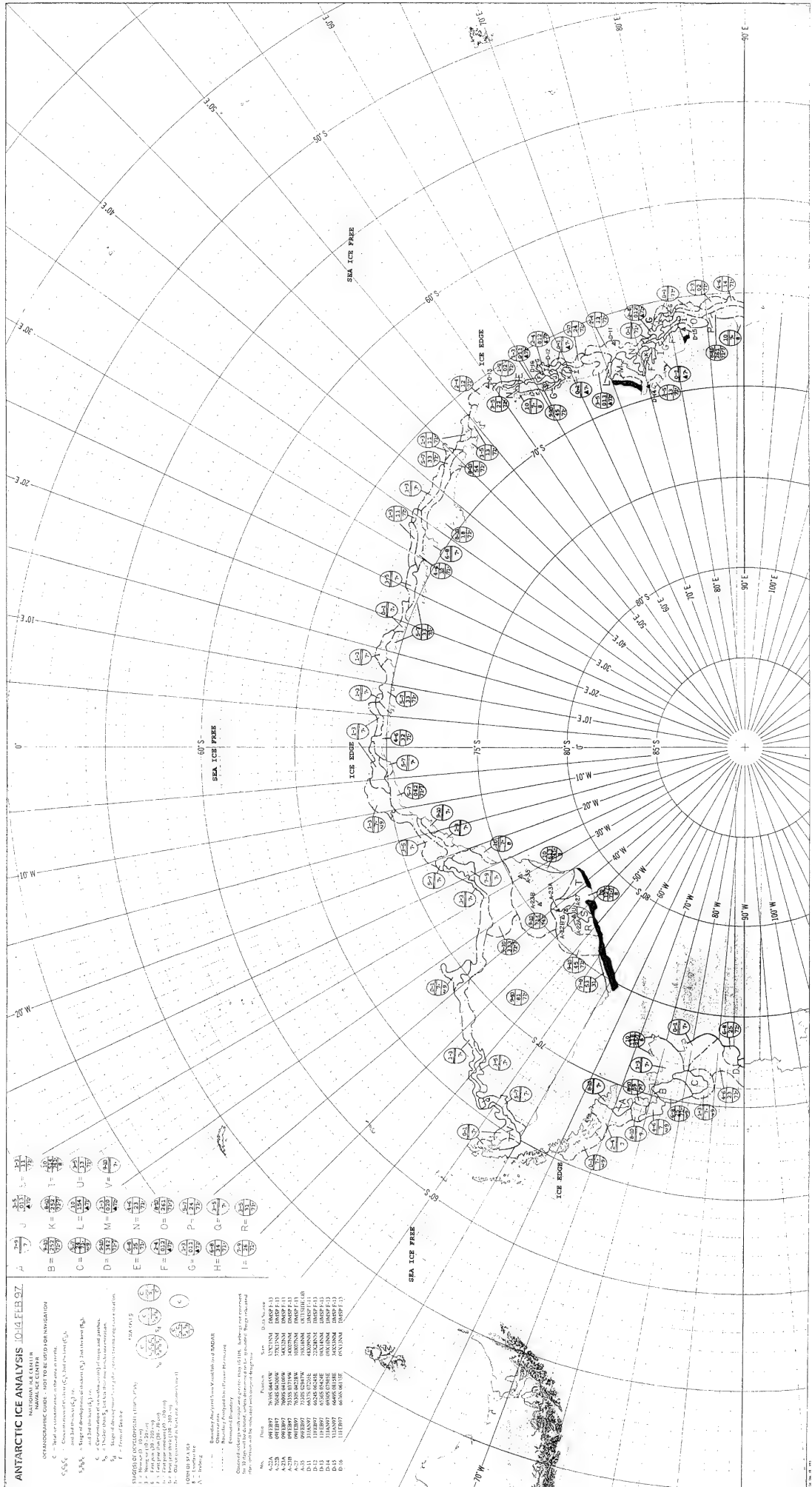
P_1, P_2, P_3 = Form of ice.

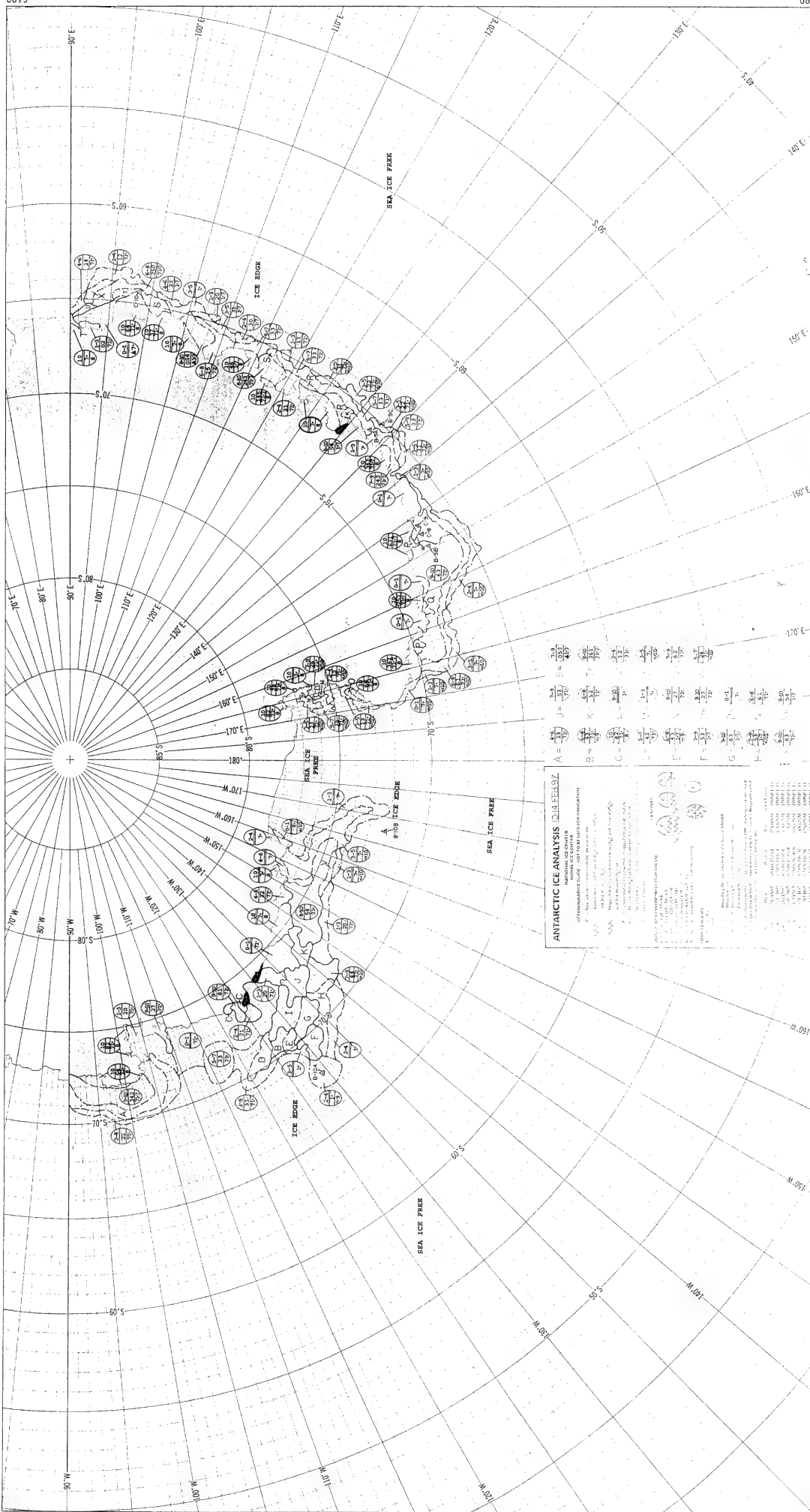
P_1, P_2, P_3 = Form of ice.

P_1, P_2, P_3 = Form of ice.

P_1, P_2, P_3 = Form of ice.

P_1, P_2, P_3 = Form of ice.





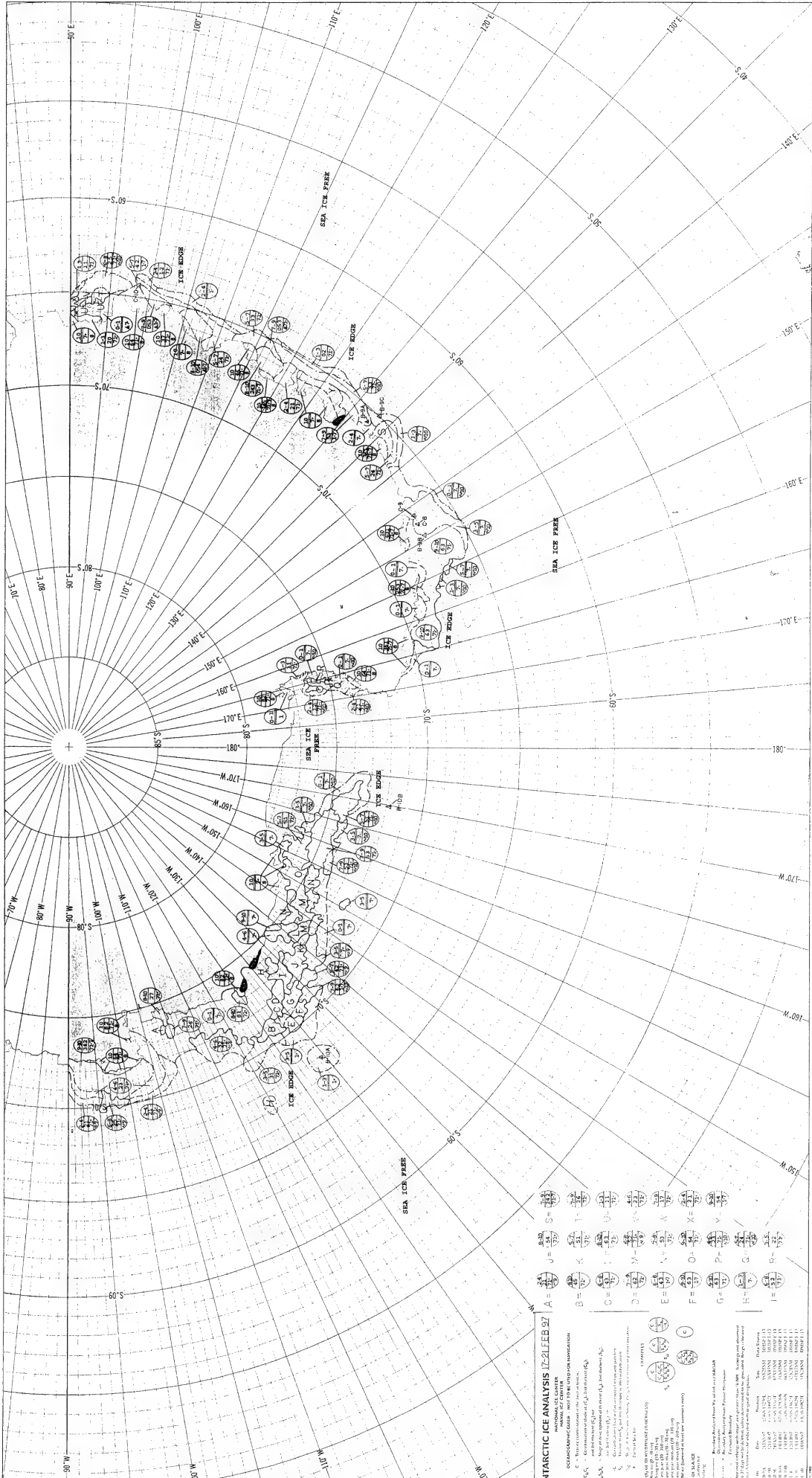
ANTARCTIC ICE ANALYSIS DATA

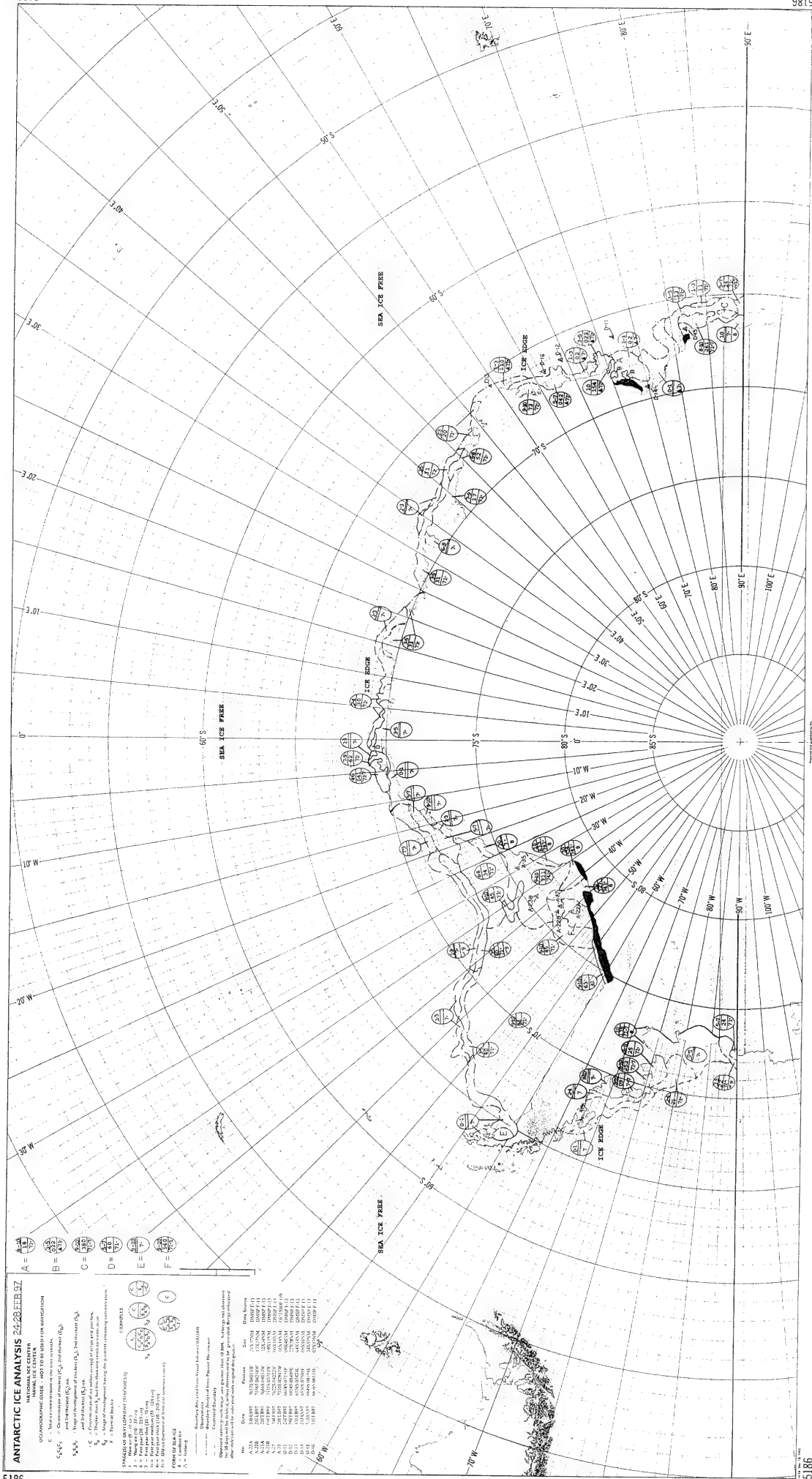
DEFINITIONS:

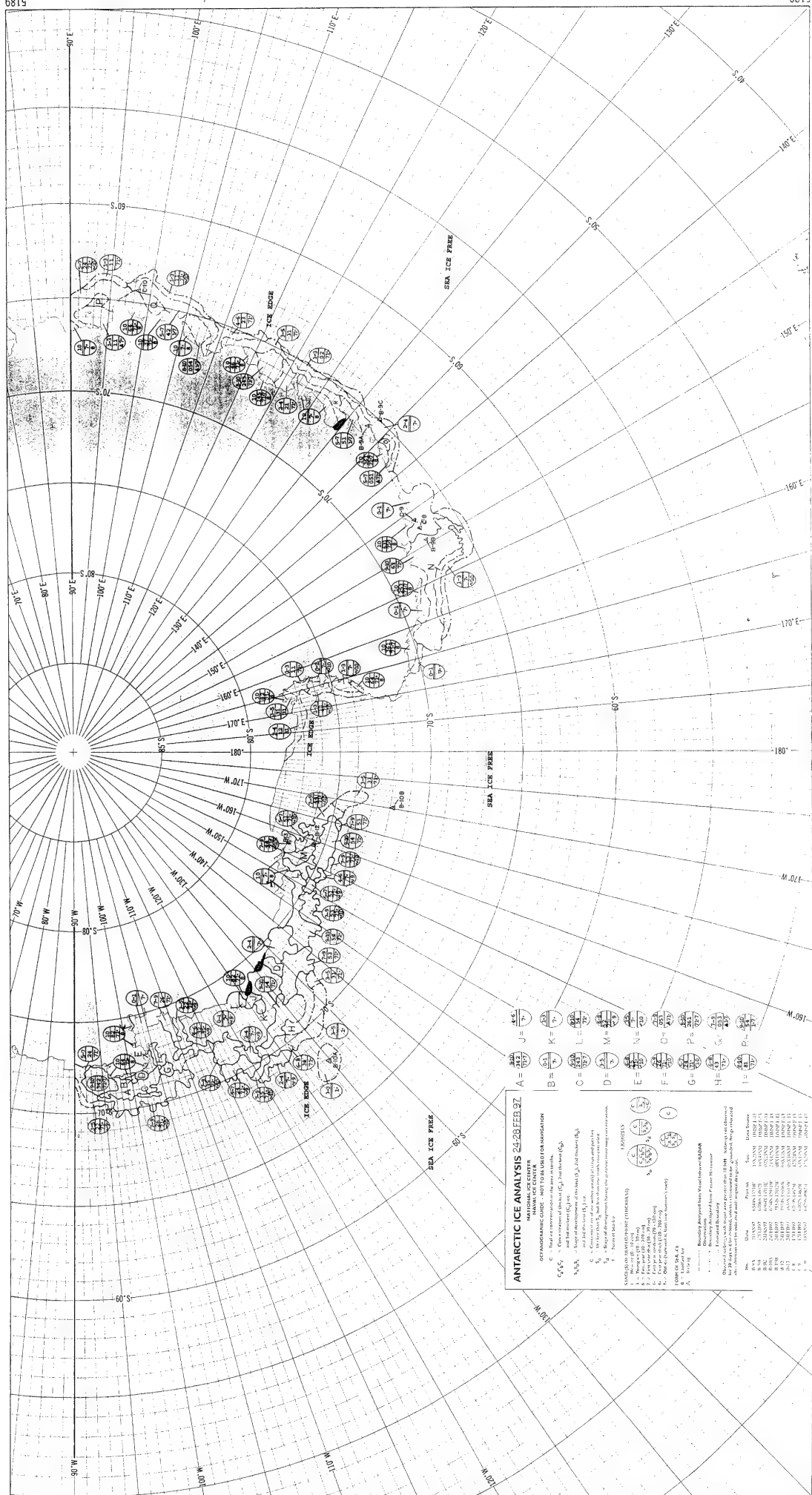
- A =** Ice thickness in feet
- B =** Ice concentration in percent
- C =** Ice strength in pounds per square foot
- D =** Ice age in years
- E =** Ice type (e.g., first-year, multi-year)
- F =** Ice movement in feet per day
- G =** Ice temperature in degrees Fahrenheit
- H =** Ice salinity in parts per thousand
- I =** Ice density in pounds per cubic foot
- J =** Ice specific heat in BTU per pound per degree Fahrenheit
- K =** Ice thermal conductivity in BTU per foot per hour per degree Fahrenheit
- L =** Ice latent heat in BTU per pound
- M =** Ice melting point in degrees Fahrenheit
- N =** Ice freezing point in degrees Fahrenheit
- O =** Ice sublimation point in degrees Fahrenheit
- P =** Ice evaporation point in degrees Fahrenheit
- Q =** Ice condensation point in degrees Fahrenheit
- R =** Ice boiling point in degrees Fahrenheit
- S =** Ice critical point in degrees Fahrenheit
- T =** Ice triple point in degrees Fahrenheit
- U =** Ice normal boiling point in degrees Fahrenheit
- V =** Ice normal melting point in degrees Fahrenheit
- W =** Ice normal sublimation point in degrees Fahrenheit
- X =** Ice normal condensation point in degrees Fahrenheit
- Y =** Ice normal evaporation point in degrees Fahrenheit
- Z =** Ice normal freezing point in degrees Fahrenheit

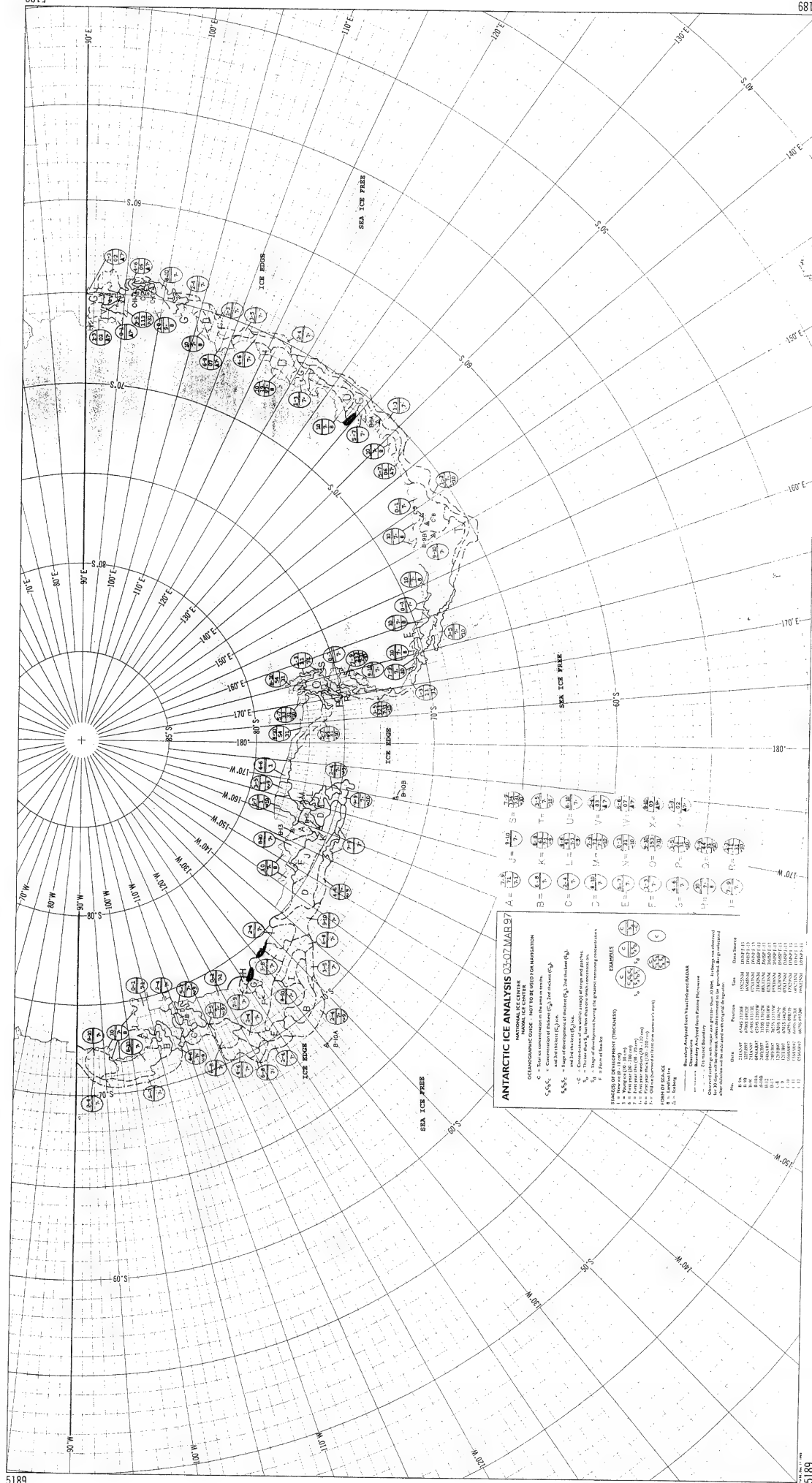
NOTES:

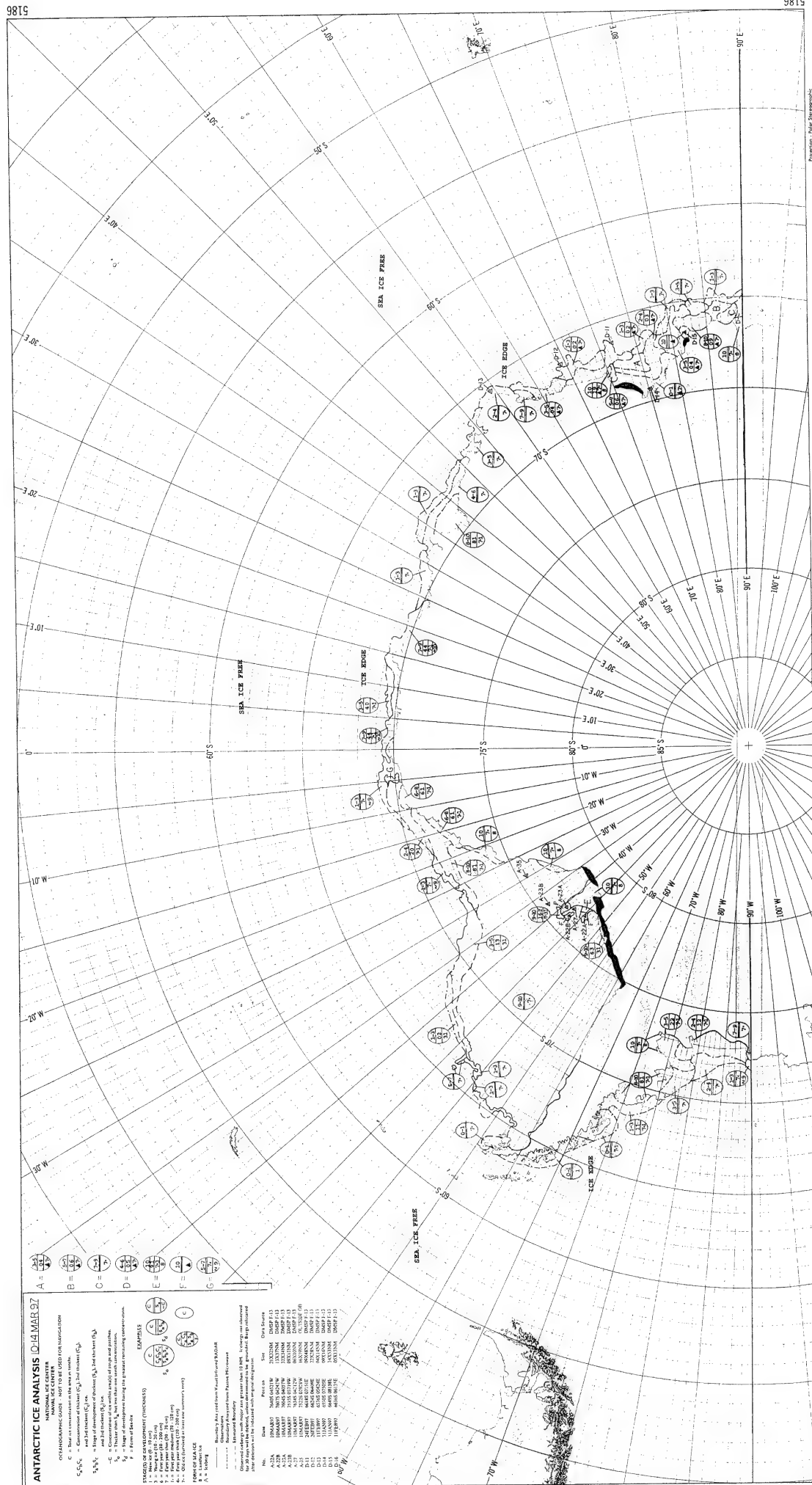
- 1. All data are based on observations made during the Antarctic expedition of 1956-1957.
- 2. The data are presented in a form suitable for use in the Antarctic ice analysis program.
- 3. The data are presented in a form suitable for use in the Antarctic ice analysis program.

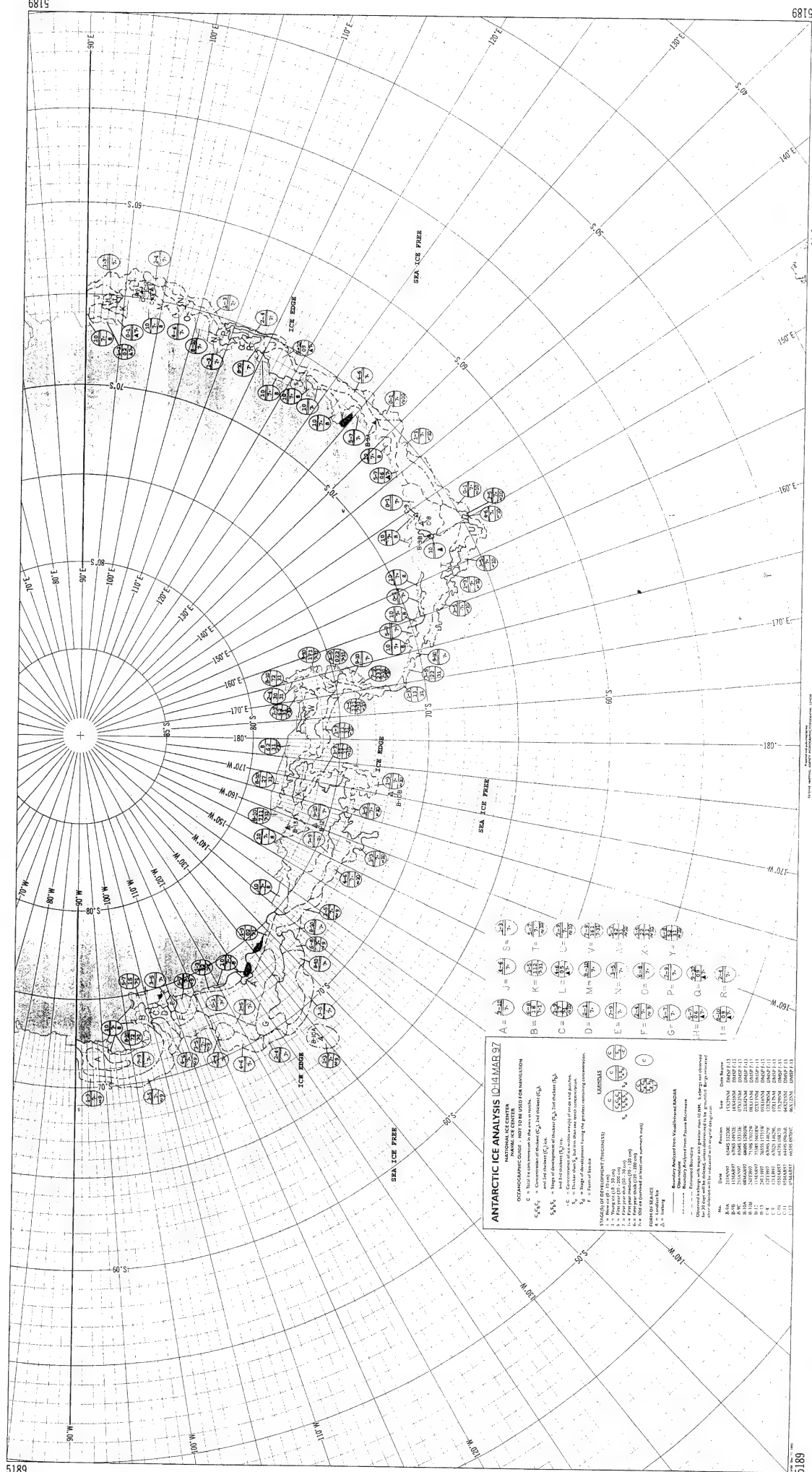


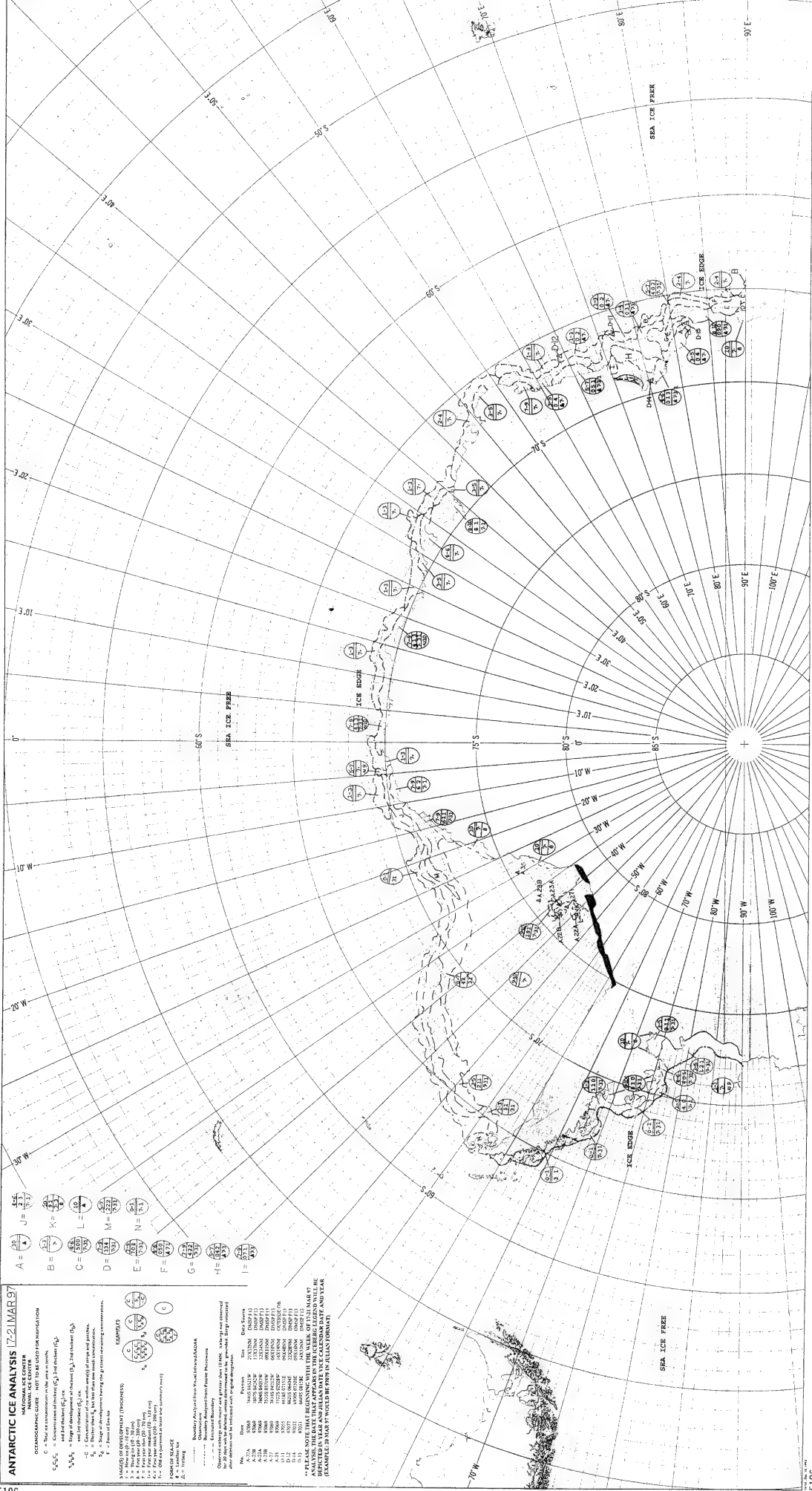






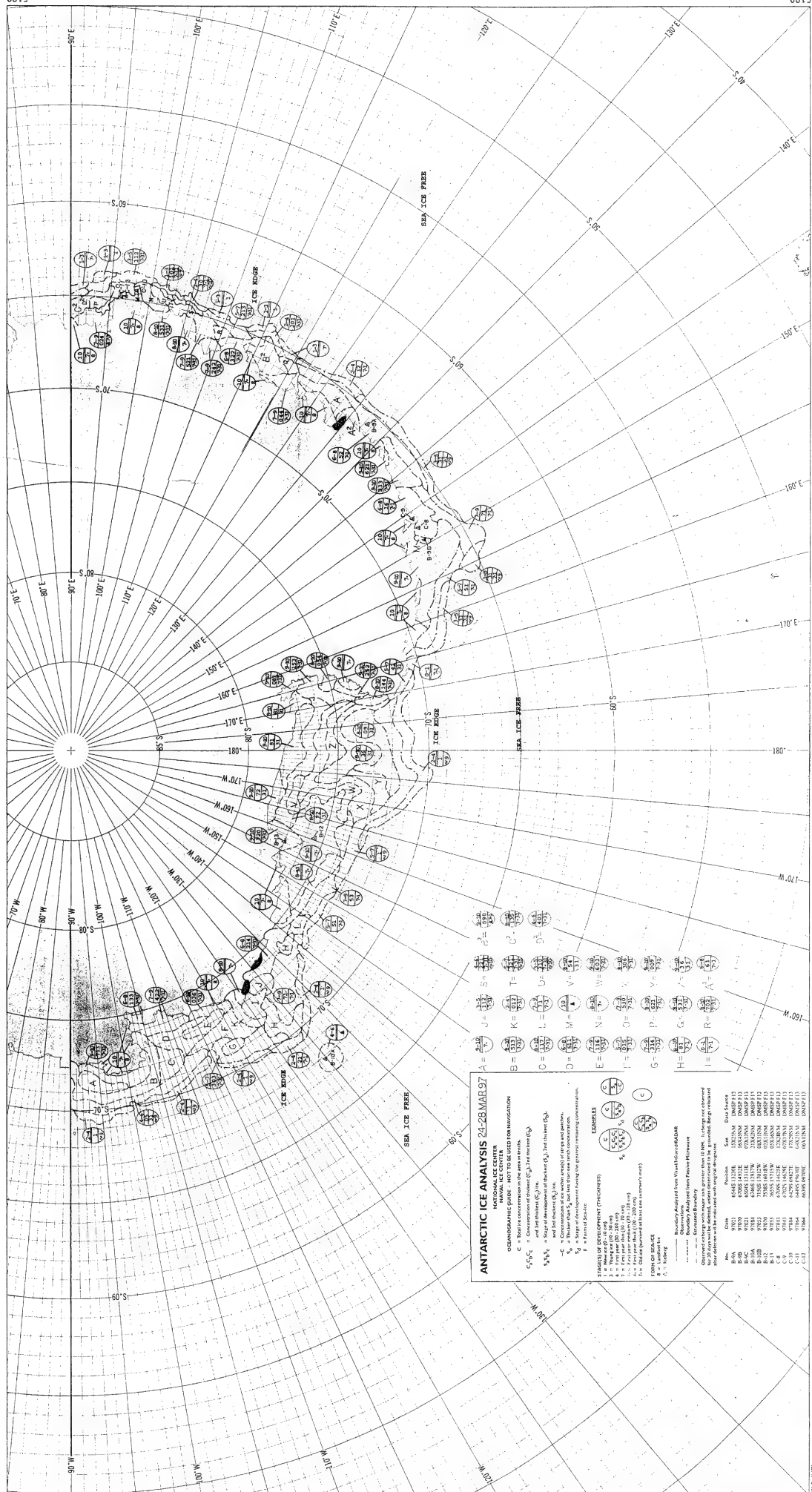






ANTARCTIC ICE ANALYSIS 17-21 MAR 97
NATIONAL ICE CENTER
OCEANOGRAPHIC CHART - NOT TO BE USED FOR NAVIGATION
C = Total ice concentration in the area in tenths.
C₁C₂C₃C₄ = Ice concentration in the area in tenths.
C₁C₂C₃C₄C₅C₆C₇C₈C₉C₁₀C₁₁C₁₂C₁₃C₁₄C₁₅C₁₆C₁₇C₁₈C₁₉C₂₀C₂₁C₂₂C₂₃C₂₄C₂₅C₂₆C₂₇C₂₈C₂₉C₃₀C₃₁C₃₂C₃₃C₃₄C₃₅C₃₆C₃₇C₃₈C₃₉C₄₀C₄₁C₄₂C₄₃C₄₄C₄₅C₄₆C₄₇C₄₈C₄₉C₅₀C₅₁C₅₂C₅₃C₅₄C₅₅C₅₆C₅₇C₅₈C₅₉C₆₀C₆₁C₆₂C₆₃C₆₄C₆₅C₆₆C₆₇C₆₈C₆₉C₇₀C₇₁C₇₂C₇₃C₇₄C₇₅C₇₆C₇₇C₇₈C₇₉C₈₀C₈₁C₈₂C₈₃C₈₄C₈₅C₈₆C₈₇C₈₈C₈₉C₉₀C₉₁C₉₂C₉₃C₉₄C₉₅C₉₆C₉₇C₉₈C₉₉C₁₀₀C₁₀₁C₁₀₂C₁₀₃C₁₀₄C₁₀₅C₁₀₆C₁₀₇C₁₀₈C₁₀₉C₁₁₀C₁₁₁C₁₁₂C₁₁₃C₁₁₄C₁₁₅C₁₁₆C₁₁₇C₁₁₈C₁₁₉C₁₂₀C₁₂₁C₁₂₂C₁₂₃C₁₂₄C₁₂₅C₁₂₆C₁₂₇C₁₂₈C₁₂₉C₁₃₀C₁₃₁C₁₃₂C₁₃₃C₁₃₄C₁₃₅C₁₃₆C₁₃₇C₁₃₈C₁₃₉C₁₄₀C₁₄₁C₁₄₂C₁₄₃C₁₄₄C₁₄₅C₁₄₆C₁₄₇C₁₄₈C₁₄₉C₁₅₀C₁₅₁C₁₅₂C₁₅₃C₁₅₄C₁₅₅C₁₅₆C₁₅₇C₁₅₈C₁₅₉C₁₆₀C₁₆₁C₁₆₂C₁₆₃C₁₆₄C₁₆₅C₁₆₆C₁₆₇C₁₆₈C₁₆₉C₁₇₀C₁₇₁C₁₇₂C₁₇₃C₁₇₄C₁₇₅C₁₇₆C₁₇₇C₁₇₈C₁₇₉C₁₈₀C₁₈₁C₁₈₂C₁₈₃C₁₈₄C₁₈₅C₁₈₆C₁₈₇C₁₈₈C₁₈₉C₁₉₀C₁₉₁C₁₉₂C₁₉₃C₁₉₄C₁₉₅C₁₉₆C₁₉₇C₁₉₈C₁₉₉C₂₀₀C₂₀₁C₂₀₂C₂₀₃C₂₀₄C₂₀₅C₂₀₆C₂₀₇C₂₀₈C₂₀₉C₂₁₀C₂₁₁C₂₁₂C₂₁₃C₂₁₄C₂₁₅C₂₁₆C₂₁₇C₂₁₈C₂₁₉C₂₂₀C₂₂₁C₂₂₂C₂₂₃C₂₂₄C₂₂₅C₂₂₆C₂₂₇C₂₂₈C₂₂₉C₂₃₀C₂₃₁C₂₃₂C₂₃₃C₂₃₄C₂₃₅C₂₃₆C₂₃₇C₂₃₈C₂₃₉C₂₄₀C₂₄₁C₂₄₂C₂₄₃C₂₄₄C₂₄₅C₂₄₆C₂₄₇C₂₄₈C₂₄₉C₂₅₀C₂₅₁C₂₅₂C₂₅₃C₂₅₄C₂₅₅C₂₅₆C₂₅₇C₂₅₈C₂₅₉C₂₆₀C₂₆₁C₂₆₂C₂₆₃C₂₆₄C₂₆₅C₂₆₆C₂₆₇C₂₆₈C₂₆₉C₂₇₀C₂₇₁C₂₇₂C₂₇₃C₂₇₄C₂₇₅C₂₇₆C₂₇₇C₂₇₈C₂₇₉C₂₈₀C₂₈₁C₂₈₂C₂₈₃C₂₈₄C₂₈₅C₂₈₆C₂₈₇C₂₈₈C₂₈₉C₂₉₀C₂₉₁C₂₉₂C₂₉₃C₂₉₄C₂₉₅C₂₉₆C₂₉₇C₂₉₈C₂₉₉C₃₀₀C₃₀₁C₃₀₂C₃₀₃C₃₀₄C₃₀₅C₃₀₆C₃₀₇C₃₀₈C₃₀₉C₃₁₀C₃₁₁C₃₁₂C₃₁₃C₃₁₄C₃₁₅C₃₁₆C₃₁₇C₃₁₈C₃₁₉C₃₂₀C₃₂₁C₃₂₂C₃₂₃C₃₂₄C₃₂₅C₃₂₆C₃₂₇C₃₂₈C₃₂₉C₃₃₀C₃₃₁C₃₃₂C₃₃₃C₃₃₄C₃₃₅C₃₃₆C₃₃₇C₃₃₈C₃₃₉C₃₄₀C₃₄₁C₃₄₂C₃₄₃C₃₄₄C₃₄₅C₃₄₆C₃₄₇C₃₄₈C₃₄₉C₃₅₀C₃₅₁C₃₅₂C₃₅₃C₃₅₄C₃₅₅C₃₅₆C₃₅₇C₃₅₈C₃₅₉C₃₆₀C₃₆₁C₃₆₂C₃₆₃C₃₆₄C₃₆₅C₃₆₆C₃₆₇C₃₆₈C₃₆₉C₃₇₀C₃₇₁C₃₇₂C₃₇₃C₃₇₄C₃₇₅C₃₇₆C₃₇₇C₃₇₈C₃₇₉C₃₈₀C₃₈₁C₃₈₂C₃₈₃C₃₈₄C₃₈₅C₃₈₆C₃₈₇C₃₈₈C₃₈₉C₃₉₀C₃₉₁C₃₉₂C₃₉₃C₃₉₄C₃₉₅C₃₉₆C₃₉₇C₃₉₈C₃₉₉C₄₀₀C₄₀₁C₄₀₂C₄₀₃C₄₀₄C₄₀₅C₄₀₆C₄₀₇C₄₀₈C₄₀₉C₄₁₀C₄₁₁C₄₁₂C₄₁₃C₄₁₄C₄₁₅C₄₁₆C₄₁₇C₄₁₈C₄₁₉C₄₂₀C₄₂₁C₄₂₂C₄₂₃C₄₂₄C₄₂₅C₄₂₆C₄₂₇C₄₂₈C₄₂₉C₄₃₀C₄₃₁C₄₃₂C₄₃₃C₄₃₄C₄₃₅C₄₃₆C₄₃₇C₄₃₈C₄₃₉C₄₄₀C₄₄₁C₄₄₂C₄₄₃C₄₄₄C₄₄₅C₄₄₆C₄₄₇C₄₄₈C₄₄₉C₄₅₀C₄₅₁C₄₅₂C₄₅₃C₄₅₄C₄₅₅C₄₅₆C₄₅₇C₄₅₈C₄₅₉C₄₆₀C₄₆₁C₄₆₂C₄₆₃C₄₆₄C₄₆₅C₄₆₆C₄₆₇C₄₆₈C₄₆₉C₄₇₀C₄₇₁C₄₇₂C₄₇₃C₄₇₄C₄₇₅C₄₇₆C₄₇₇C₄₇₈C₄₇₉C₄₈₀C₄₈₁C₄₈₂C₄₈₃C₄₈₄C₄₈₅C₄₈₆C₄₈₇C₄₈₈C₄₈₉C₄₉₀C₄₉₁C₄₉₂C₄₉₃C₄₉₄C₄₉₅C₄₉₆C₄₉₇C₄₉₈C₄₉₉C₅₀₀C₅₀₁C₅₀₂C₅₀₃C₅₀₄C₅₀₅C₅₀₆C₅₀₇C₅₀₈C₅₀₉C₅₁₀C₅₁₁C₅₁₂C₅₁₃C₅₁₄C₅₁₅C₅₁₆C₅₁₇C₅₁₈C₅₁₉C₅₂₀C₅₂₁C₅₂₂C₅₂₃C₅₂₄C₅₂₅C₅₂₆C₅₂₇C₅₂₈C₅₂₉C₅₃₀C₅₃₁C₅₃₂C₅₃₃C₅₃₄C₅₃₅C₅₃₆C₅₃₇C₅₃₈C₅₃₉C₅₄₀C₅₄₁C₅₄₂C₅₄₃C₅₄₄C₅₄₅C₅₄₆C₅₄₇C₅₄₈C₅₄₉C₅₅₀C₅₅₁C₅₅₂C₅₅₃C₅₅₄C₅₅₅C₅₅₆C₅₅₇C₅₅₈C₅₅₉C₅₆₀C₅₆₁C₅₆₂C₅₆₃C₅₆₄C₅₆₅C₅₆₆C₅₆₇C₅₆₈C₅₆₉C₅₇₀C₅₇₁C₅₇₂C₅₇₃C₅₇₄C₅₇₅C₅₇₆C₅₇₇C₅₇₈C₅₇₉C₅₈₀C₅₈₁C₅₈₂C₅₈₃C₅₈₄C₅₈₅C₅₈₆C₅₈₇C₅₈₈C₅₈₉C₅₉₀C₅₉₁C₅₉₂C₅₉₃C₅₉₄C₅₉₅C₅₉₆C₅₉₇C₅₉₈C₅₉₉C₆₀₀C₆₀₁C₆₀₂C₆₀₃C₆₀₄C₆₀₅C₆₀₆C₆₀₇C₆₀₈C₆₀₉C₆₁₀C₆₁₁C₆₁₂C₆₁₃C₆₁₄C₆₁₅C₆₁₆C₆₁₇C₆₁₈C₆₁₉C₆₂₀C₆₂₁C₆₂₂C₆₂₃C₆₂₄C₆₂₅C₆₂₆C₆₂₇C₆₂₈C₆₂₉C₆₃₀C₆₃₁C₆₃₂C₆₃₃C₆₃₄C₆₃₅C₆₃₆C₆₃₇C₆₃₈C₆₃₉C₆₄₀C₆₄₁C₆₄₂C₆₄₃C₆₄₄C₆₄₅C₆₄₆C₆₄₇C₆₄₈C₆₄₉C₆₅₀C₆₅₁C₆₅₂C₆₅₃C₆₅₄C₆₅₅C₆₅₆C₆₅₇C₆₅₈C₆₅₉C₆₆₀C₆₆₁C₆₆₂C₆₆₃C₆₆₄C₆₆₅C₆₆₆C₆₆₇C₆₆₈C₆₆₉C₆₇₀C₆₇₁C₆₇₂C₆₇₃C₆₇₄C₆₇₅C₆₇₆C₆₇₇C₆₇₈C₆₇₉C₆₈₀C₆₈₁C₆₈₂C₆₈₃C₆₈₄C₆₈₅C₆₈₆C₆₈₇C₆₈₈C₆₈₉C₆₉₀C₆₉₁C₆₉₂C₆₉₃C₆₉₄C₆₉₅C₆₉₆C₆₉₇C₆₉₈C₆₉₉C₇₀₀C₇₀₁C₇₀₂C₇₀₃C₇₀₄C₇₀₅C₇₀₆C₇₀₇C₇₀₈C₇₀₉C₇₁₀C₇₁₁C₇₁₂C₇₁₃C₇₁₄C₇₁₅C₇₁₆C₇₁₇C₇₁₈C₇₁₉C₇₂₀C₇₂₁C₇₂₂C₇₂₃C₇₂₄C₇₂₅C₇₂₆C₇₂₇C₇₂₈C₇₂₉C₇₃₀C₇₃₁C₇₃₂C₇₃₃C₇₃₄C₇₃₅C₇₃₆C₇₃₇C₇₃₈C₇₃₉C₇₄₀C₇₄₁C₇₄₂C₇₄₃C₇₄₄C₇₄₅C₇₄₆C₇₄₇C₇₄₈C₇₄₉C₇₅₀C₇₅₁C₇₅₂C₇₅₃C₇₅₄C₇₅₅C₇₅₆C₇₅₇C₇₅₈C₇₅₉C₇₆₀C₇₆₁C₇₆₂C₇₆₃C₇₆₄C₇₆₅C₇₆₆C₇₆₇C₇₆₈C₇₆₉C₇₇₀C₇₇₁C₇₇₂C₇₇₃C₇₇₄C₇₇₅C₇₇₆C₇₇₇C₇₇₈C₇₇₉C₇₈₀C₇₈₁C₇₈₂C₇₈₃C₇₈₄C₇₈₅C₇₈₆C₇₈₇C₇₈₈C₇₈₉C₇₉₀C₇₉₁C₇₉₂C₇₉₃C₇₉₄C₇₉₅C₇₉₆C₇₉₇C₇₉₈C₇₉₉C₈₀₀C₈₀₁C₈₀₂C₈₀₃C₈₀₄C₈₀₅C₈₀₆C₈₀₇C₈₀₈C₈₀₉C₈₁₀C₈₁₁C₈₁₂C₈₁₃C₈₁₄C₈₁₅C₈₁₆C₈₁₇C₈₁₈C₈₁₉C₈₂₀C₈₂₁C₈₂₂C₈₂₃C₈₂₄C₈₂₅C₈₂₆C₈₂₇C₈₂₈C₈₂₉C₈₃₀C₈₃₁C₈₃₂C₈₃₃C₈₃₄C₈₃₅C₈₃₆C₈₃₇C₈₃₈C₈₃₉C₈₄₀C₈₄₁C₈₄₂C₈₄₃C₈₄₄C₈₄₅C₈₄₆C₈₄₇C₈₄₈C₈₄₉C₈₅₀C₈₅₁C₈₅₂C₈₅₃C₈₅₄C₈₅₅C₈₅₆C₈₅₇C₈₅₈C₈₅₉C₈₆₀C₈₆₁C₈₆₂C₈₆₃C₈₆₄C₈₆₅C₈₆₆C₈₆₇C₈₆₈C₈₆₉C₈₇₀C₈₇₁C₈₇₂C₈₇₃C₈₇₄C₈₇₅C₈₇₆C₈₇₇C₈₇₈C₈₇₉C₈₈₀C₈₈₁C₈₈₂C₈₈₃C₈₈₄C₈₈₅C₈₈₆C₈₈₇C₈₈₈C₈₈₉C₈₉₀C₈₉₁C₈₉₂C₈₉₃C₈₉₄C₈₉₅C₈₉₆C₈₉₇C₈₉₈C₈₉₉C₉₀₀C₉₀₁C₉₀₂C₉₀₃C₉₀₄C₉₀₅C₉₀₆C₉₀₇C₉₀₈C₉₀₉C₉₁₀C₉₁₁C₉₁₂C₉₁₃C₉₁₄C₉₁₅C₉₁₆C₉₁₇C₉₁₈C₉₁₉C₉₂₀C₉₂₁C₉₂₂C₉₂₃C₉₂₄C₉₂₅C₉₂₆C₉₂₇C₉₂₈C₉₂₉C₉₃₀C₉₃₁C₉₃₂C₉₃₃C₉₃₄C₉₃₅C₉₃₆C₉₃₇C₉₃₈C₉₃₉C₉₄₀C₉₄₁C₉₄₂C₉₄₃C₉₄₄C₉₄₅C₉₄₆C₉₄₇C₉₄₈C₉₄₉C₉₅₀C₉₅₁C₉₅₂C₉₅₃C₉₅₄C₉₅₅C₉₅₆C₉₅₇C₉₅₈C₉₅₉C₉₆₀C₉₆₁C₉₆₂C₉₆₃C₉₆₄C₉₆₅C₉₆₆C₉₆₇C₉₆₈C₉₆₉C₉₇₀C₉₇₁C₉₇₂C₉₇₃C₉₇₄C₉₇₅C₉₇₆C₉₇₇C₉₇₈C₉₇₉C₉₈₀C₉₈₁C₉₈₂C₉₈₃C₉₈₄C₉₈₅C₉₈₆C₉₈₇C₉₈₈C₉₈₉C₉₉₀C₉₉₁C₉₉₂C₉₉₃C₉₉₄C₉₉₅C₉₉₆C₉₉₇C₉₉₈C₉₉₉C₁₀₀₀C₁₀₀₁C₁₀₀₂C₁₀₀₃C₁₀₀₄C₁₀₀₅C₁₀₀₆C₁₀₀₇C₁₀₀₈C₁₀₀₉C₁₀₁₀C₁₀₁₁C₁₀₁₂C₁₀₁₃C₁₀₁₄C₁₀₁₅C₁₀₁₆C₁₀₁₇C₁₀₁₈C₁₀₁₉C₁₀₂₀C₁₀₂₁C₁₀₂₂C₁₀₂₃C₁₀₂₄C₁₀₂₅C₁₀₂₆C₁₀₂₇C₁₀₂₈C₁₀₂₉C₁₀₃₀C₁₀₃₁C₁₀₃₂C₁₀₃₃C₁₀₃₄C₁₀₃₅C₁₀₃₆C₁₀₃₇C₁₀₃₈C₁₀₃₉C₁₀₄₀C₁₀₄₁C₁₀₄₂C₁₀₄₃C₁₀₄₄C₁₀₄₅C₁₀₄₆C₁₀₄₇C₁₀₄₈C₁₀₄₉C₁₀₅₀C₁₀₅₁C₁₀₅₂C₁₀₅₃C₁₀₅₄C₁₀₅₅C₁₀₅₆C₁₀₅₇C₁₀₅₈C₁₀₅₉C₁₀₆₀C₁₀₆₁C₁₀₆₂C₁₀₆₃C₁₀₆₄C₁₀₆₅C₁₀₆₆C₁₀₆₇C₁₀₆₈C₁₀₆₉C₁₀₇₀C₁₀₇₁C₁₀₇₂C₁₀₇₃C₁₀₇₄C₁₀₇₅C₁₀₇₆C₁₀₇₇C₁₀₇₈C₁₀₇₉C₁₀₈₀C₁₀₈₁C₁₀₈₂C₁₀₈₃C₁₀₈₄C₁₀₈₅C₁₀₈₆C₁₀₈₇C₁₀₈₈C₁₀₈₉C₁₀₉₀C₁₀₉₁C₁₀₉₂C₁₀₉₃C₁₀₉₄C₁₀₉₅C₁₀₉₆C₁₀₉₇C₁₀₉₈C₁₀₉₉C₁₁₀₀C₁₁₀₁C₁₁₀₂C₁₁₀₃C₁₁₀₄C₁₁₀₅C₁₁₀₆C₁₁₀₇C₁₁₀₈C₁₁₀₉C₁₁₁₀C₁₁₁₁C₁₁₁₂C₁₁₁₃C₁₁₁₄C₁₁₁₅C₁₁₁₆C₁₁₁₇C₁₁₁₈C₁₁₁₉C₁₁₂₀C₁₁₂₁C₁₁₂₂C₁₁₂₃C₁₁₂₄C₁₁₂₅C₁₁₂₆C₁₁₂₇C₁₁₂₈C₁₁₂₉C₁₁₃₀C₁₁₃₁C₁₁₃₂C₁₁₃₃C₁₁₃₄C₁₁₃₅C₁₁₃₆C₁₁₃₇C₁₁₃₈C₁₁₃₉C₁₁₄₀C₁₁₄₁C₁₁₄₂C₁₁₄₃C₁₁₄₄C₁₁₄₅C₁₁₄₆C₁₁₄₇C₁₁₄₈C₁₁₄₉C₁₁₅₀C₁₁₅₁C₁₁₅₂C₁₁₅₃C₁₁₅₄C₁₁₅₅C₁₁₅₆C₁₁₅₇C₁₁₅₈C₁₁₅₉C₁₁₆₀C₁₁₆₁C₁₁₆₂C₁₁₆₃C₁₁₆₄C₁₁₆₅C₁₁₆₆C₁₁₆₇C₁₁₆₈C₁₁₆₉C₁₁₇₀C₁₁₇₁C₁₁₇₂C₁₁₇₃C₁₁₇₄C₁₁₇₅C₁₁₇₆C₁₁₇₇C₁₁₇₈C₁₁₇₉C₁₁₈₀C₁₁₈₁C₁₁₈₂C₁₁₈₃C₁₁₈₄C₁₁₈₅C₁₁₈₆C₁₁₈₇C₁₁₈₈C₁₁₈₉C₁₁₉₀C₁₁₉₁C₁₁₉₂C₁₁₉₃C₁₁₉₄C₁₁₉₅C₁₁₉₆C₁₁₉₇C₁₁₉₈C₁₁₉₉C₁₂₀₀C₁₂₀₁C₁₂₀₂C₁₂₀₃C₁₂₀₄C₁₂₀₅C₁₂₀₆C₁₂₀₇C₁₂₀₈C₁₂₀₉C₁₂₁₀C₁₂₁₁C₁₂₁₂C₁₂₁₃C₁₂₁₄C₁₂₁₅C₁₂₁₆C₁₂₁₇C₁₂₁₈C₁₂₁₉C₁₂₂₀C₁₂₂₁C₁₂₂₂C₁₂₂₃C₁₂₂₄C₁₂₂₅C₁₂₂₆C₁₂₂₇C₁₂₂₈C₁₂₂₉C₁₂₃₀C₁₂₃₁C₁₂₃₂C₁₂₃₃C₁₂₃₄C₁₂₃₅C₁₂₃₆C₁₂₃₇C₁₂₃₈C₁₂₃₉C₁₂₄₀C₁₂₄₁C₁₂₄₂C₁₂₄₃C₁₂₄₄C₁₂₄₅C₁₂₄₆C₁₂₄₇C₁₂₄₈C₁₂₄₉C₁₂₅₀C₁₂₅₁C₁₂₅₂C₁₂₅₃C₁₂₅₄C₁₂₅₅C₁₂₅₆C₁₂₅₇C₁₂₅₈C₁₂₅₉C₁₂₆₀C₁₂₆₁C₁₂₆₂C₁₂₆₃C₁₂₆₄C₁₂₆₅C₁₂₆₆C₁₂₆₇C₁₂₆₈C₁₂₆₉C₁₂₇₀C₁₂₇₁C₁₂₇₂C₁₂₇₃C₁₂₇₄C₁₂₇₅C₁₂₇₆C₁₂₇₇C₁₂₇₈C₁₂₇₉C₁₂₈₀C₁₂₈₁C₁₂₈₂C₁₂₈₃C₁₂₈₄C₁₂₈₅C₁₂₈₆C₁₂₈₇C₁₂₈₈C₁₂₈₉C₁₂₉₀C₁₂₉₁C₁₂₉₂C₁₂₉₃C₁₂₉₄C₁₂₉₅C₁₂₉₆C₁₂₉₇C₁₂₉₈C₁₂₉₉C₁₃₀₀C₁₃₀₁C₁₃₀₂C₁₃₀₃C₁₃₀₄C₁₃₀₅C₁₃₀₆C₁₃₀₇C₁₃₀₈C₁₃₀₉C₁₃₁₀C₁₃₁₁C₁₃₁₂C₁₃₁₃C₁₃₁₄





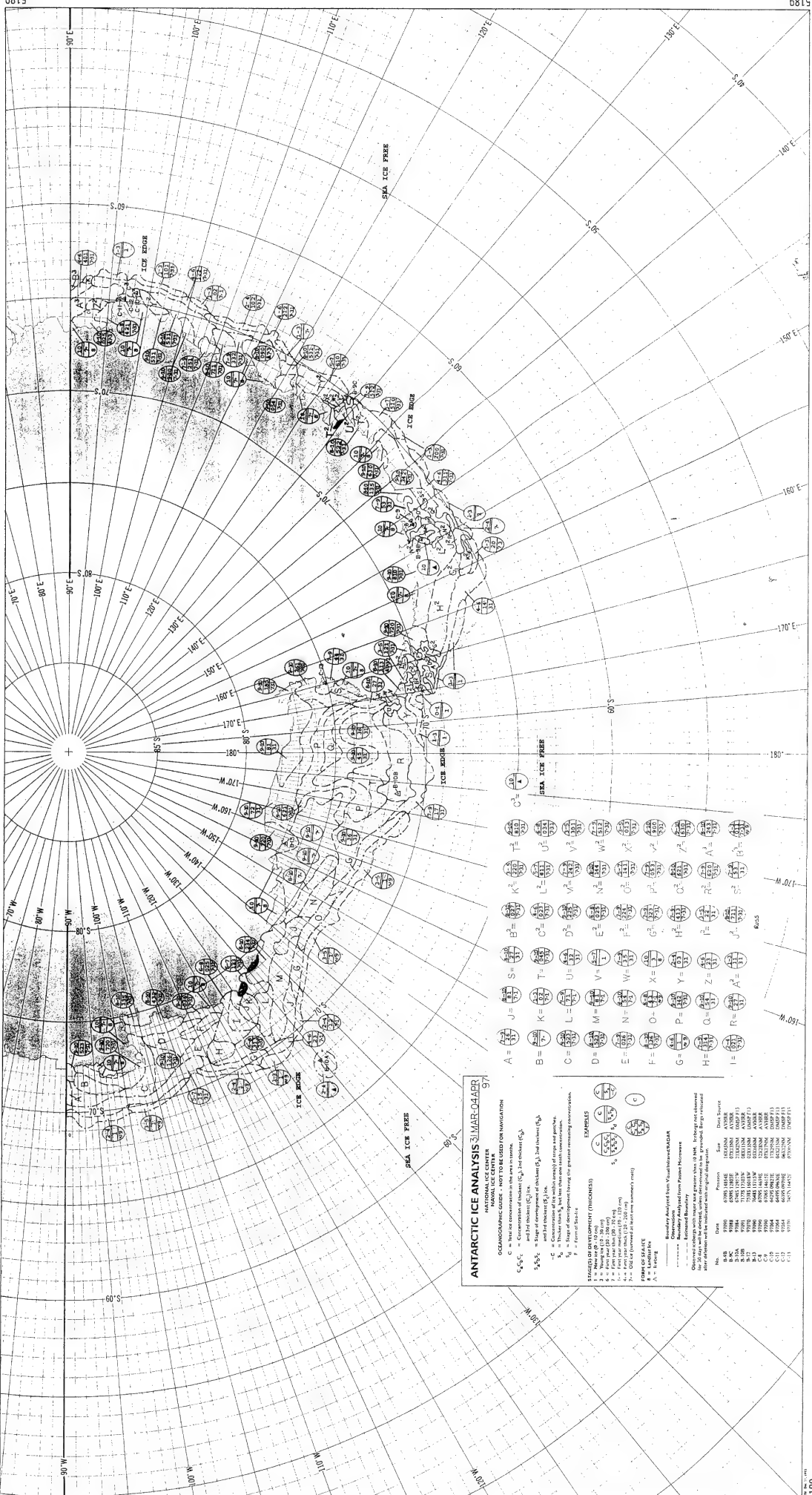
ANTARCTIC ICE ANALYSIS 31 MAR-04 APR 07

NATIONAL ICE CENTER 97

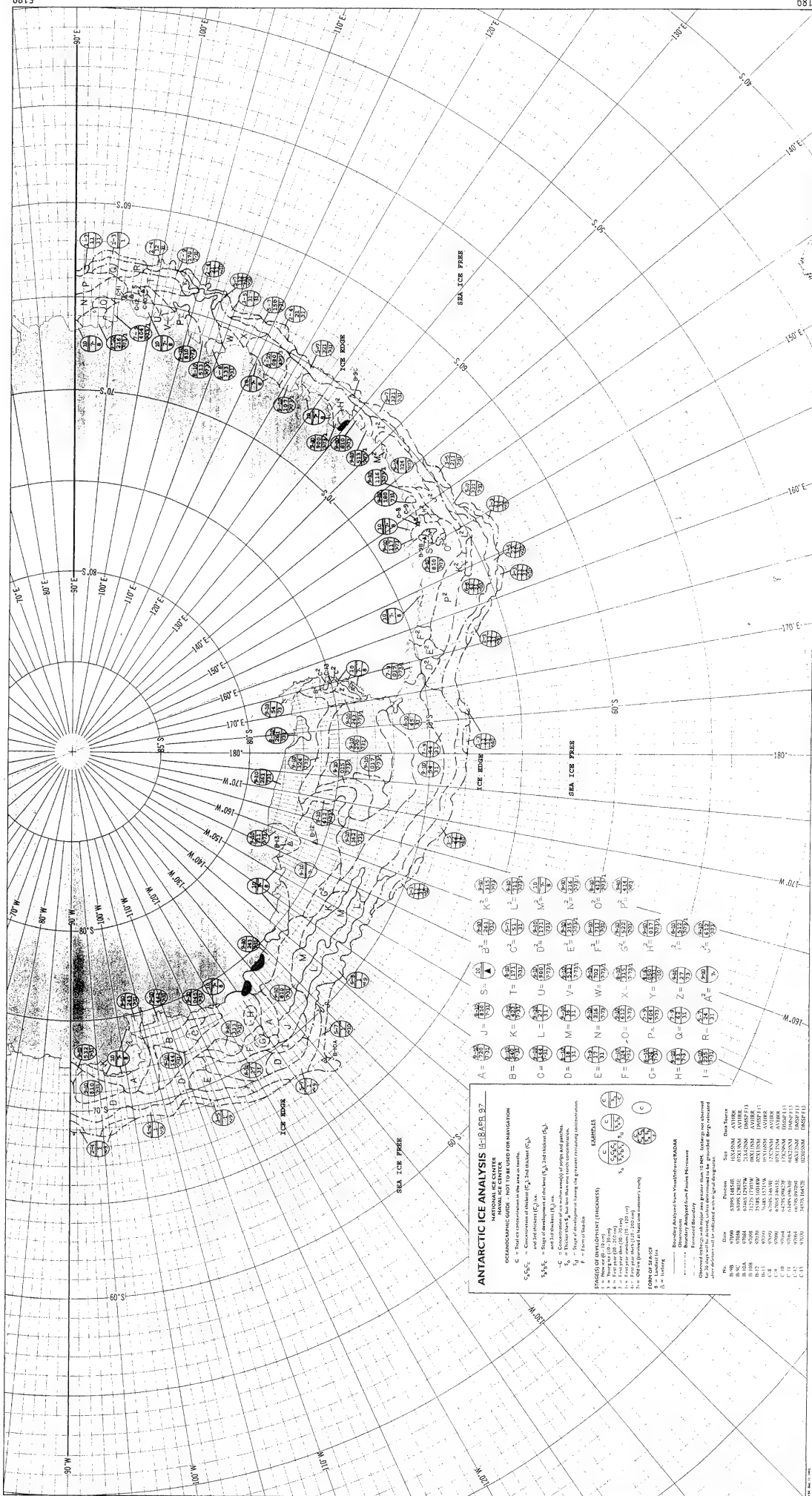
NATIONAL ICE CENTER

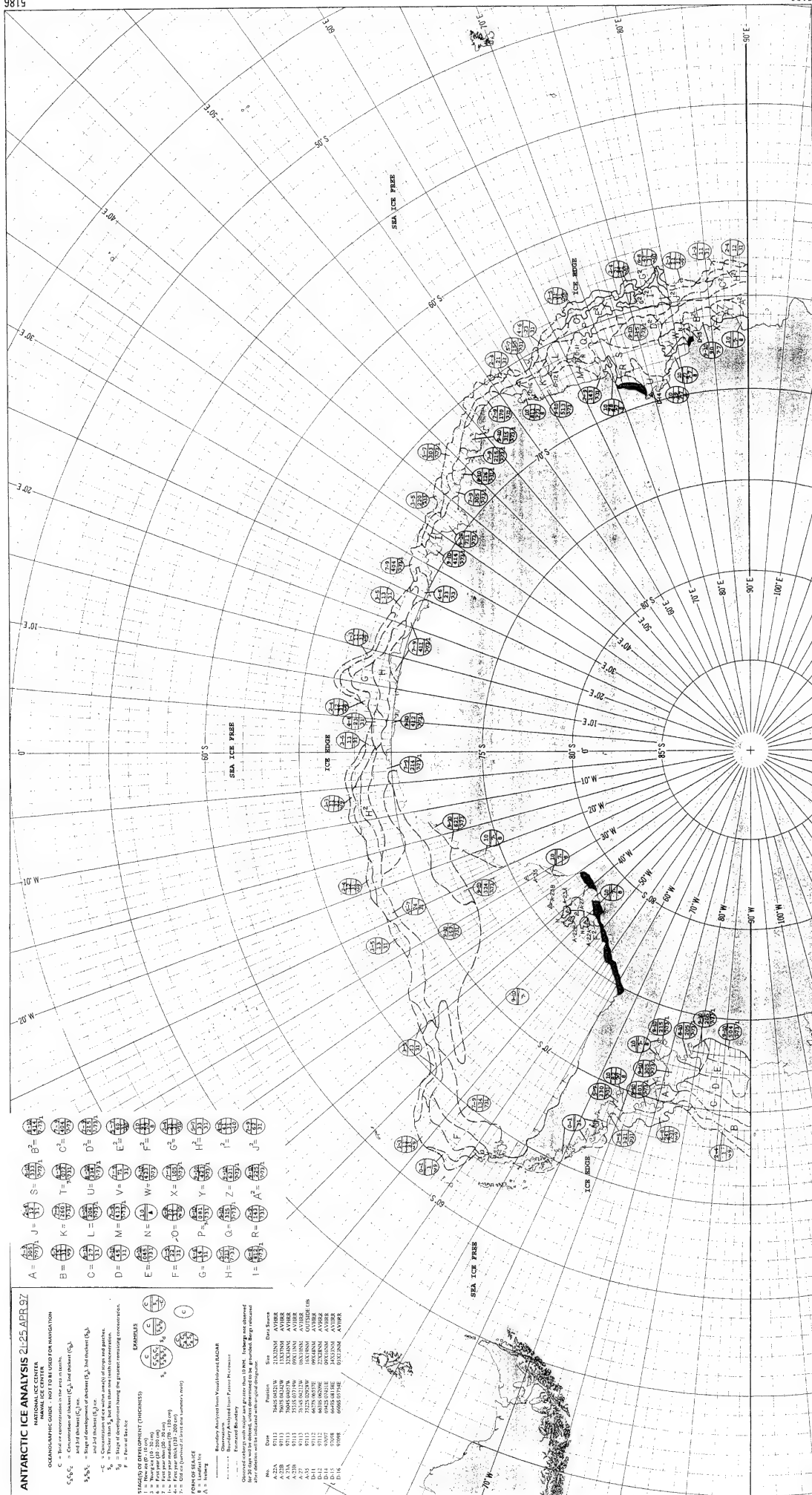
NAVAL ICE CENTER
OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION

C = Total Hg concentration in the area in $\mu\text{g/g}$. C_A, C_B, C_C = Concentration of thickest (C_A), 2nd thickest (C_B),



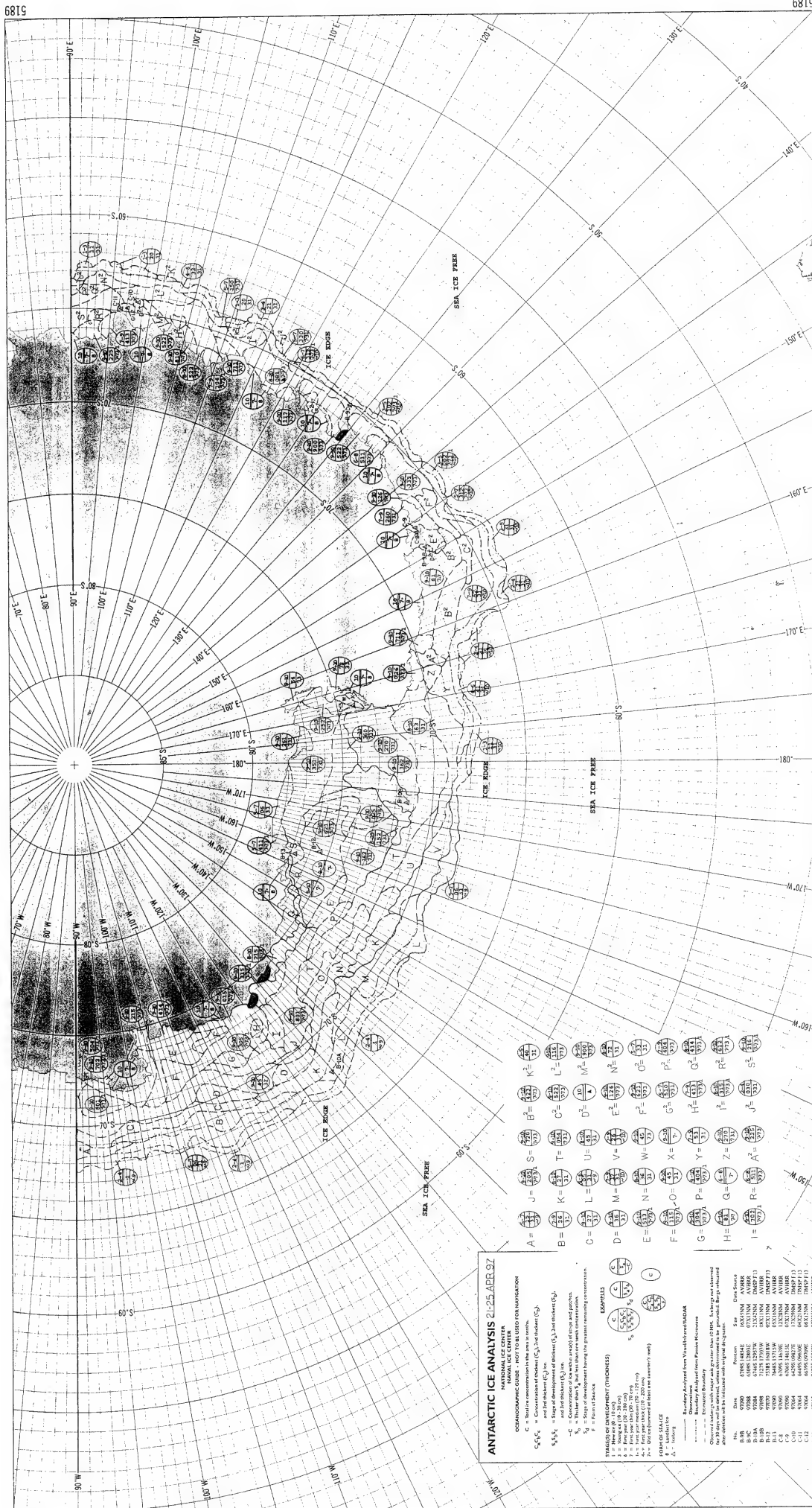




Injection - Polar Stereographic
Scale 1:7 500 000

Prepared and published by the

1993, Dec. 18, 1993)



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Antarctic Ice Analysis 21-25 APR 97

ANTARCTIC ICE ANALYSIS 21-25 APR 97

NATIONAL ICE CENTER
OPERATIONAL INFORMATION FOR NAVIGATION

C = Sea ice concentration in the area in percent.

C_1, C_2, C_3 = Concentration of ice in C_1 , C_2 and C_3 sea.

C_1, C_2, C_3 = and ice thickness (C_1), ice thickness (C_2), and ice thickness (C_3).

C_1, C_2, C_3 = Concentration of ice in the area of depth and pressure.

C_1, C_2, C_3 = Day of development during the present forecasting concentration.

C_1, C_2, C_3 = Form of ice.

C_1, C_2, C_3 = Form of ice.

C_1, C_2, C_3 = Form of ice.

C_1, C_2, C_3 = Form of ice.

C_1, C_2, C_3 = Form of ice.

C_1, C_2, C_3 = Form of ice.

C_1, C_2, C_3 = Form of ice.

C_1, C_2, C_3 = Form of ice.

C_1, C_2, C_3 = Form of ice.

C_1, C_2, C_3 = Form of ice.

C_1, C_2, C_3 = Form of ice.

C_1, C_2, C_3 = Form of ice.

C_1, C_2, C_3 = Form of ice.

C_1, C_2, C_3 = Form of ice.

C_1, C_2, C_3 = Form of ice.

C_1, C_2, C_3 = Form of ice.

C_1, C_2, C_3 = Form of ice.

C_1, C_2, C_3 = Form of ice.

C_1, C_2, C_3 = Form of ice.

C_1, C_2, C_3 = Form of ice.

C_1, C_2, C_3 = Form of ice.

C_1, C_2, C_3 = Form of ice.

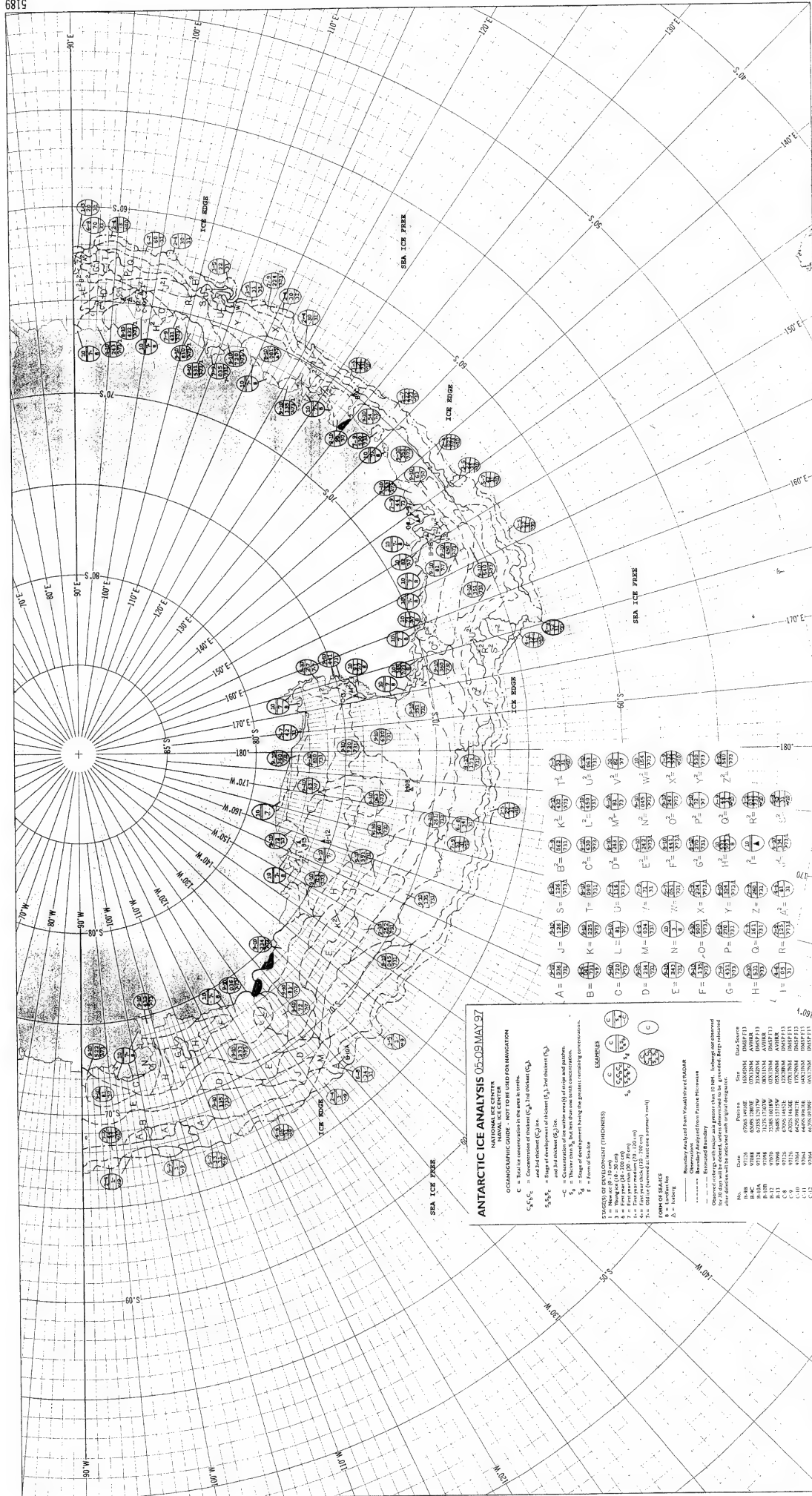
C_1, C_2, C_3 = Form of ice.

C_1, C_2, C_3 = Form of ice.

C_1, C_2, C_3 = Form of ice.

C_1, C_2, C_3 = Form of ice.





ANTARCTIC ICE ANALYSIS 05-09 MAY 97

NATIONAL ICE CENTER
NAVAL ICE CENTER
OCEANOGRAPHIC REPORT FOR NAVIGATION

SYMBOLS

- C = Total ice concentration in the area in tenths.
- C_1, C_2, C_3 = Concentration of thickets (C_1), and thickets (C_2) and 3rd thicket (C_3).
- S_1, S_2, S_3 = Size of development of thicket (S_1), 2nd thicket (S_2) and 3rd thicket (S_3).
- $-C$ = Concentration of ice within reach of ships and aircraft.
- S_0 = Thickness class S_0 but that one is not in concentration.
- F = Form of ice.
- F = Form of ice.

EXAMPLES

$\frac{C_1}{S_1} \frac{C_2}{S_2} \frac{C_3}{S_3}$

$\frac{C}{S}$

FORM OF ICE

A = Loose ice
 B = Iceberg
 C = Iceberg
 D = Iceberg
 E = Iceberg
 F = Iceberg
 G = Iceberg
 H = Iceberg
 I = Iceberg
 J = Iceberg
 K = Iceberg
 L = Iceberg
 M = Iceberg
 N = Iceberg
 O = Iceberg
 P = Iceberg
 Q = Iceberg
 R = Iceberg
 S = Iceberg
 T = Iceberg
 U = Iceberg
 V = Iceberg
 W = Iceberg
 X = Iceberg
 Y = Iceberg
 Z = Iceberg
 1 = Iceberg
 2 = Iceberg
 3 = Iceberg
 4 = Iceberg
 5 = Iceberg
 6 = Iceberg
 7 = Iceberg
 8 = Iceberg
 9 = Iceberg
 10 = Iceberg
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 90 = Iceberg
 91 = Iceberg
 92 = Iceberg
 93 = Iceberg
 94 = Iceberg
 95 = Iceberg
 96 = Iceberg
 97 = Iceberg
 98 = Iceberg
 99 = Iceberg
 100 = Iceberg

SYMBOLS FOR ANALYSIS
C = Concentration of ice (C₁)
S = Sea ice
T = Thickness
U = Underfoot
V = Visibility
W = Wind
X = Other
Y = Other
Z = Other

EXAMPLES OF DEVELOPMENT (THICKNESS)
1. Sea ice (C₁)
2. Sea ice (C₁)
3. Sea ice (C₁)
4. Sea ice (C₁)
5. Sea ice (C₁)
6. Sea ice (C₁)
7. Sea ice (C₁)
8. Sea ice (C₁)
9. Sea ice (C₁)
10. Sea ice (C₁)

SYMBOLS FOR ANALYSIS
C = Concentration of ice (C₁)
S = Sea ice
T = Thickness
U = Underfoot
V = Visibility
W = Wind
X = Other
Y = Other
Z = Other

EXAMPLES OF DEVELOPMENT (THICKNESS)
1. Sea ice (C₁)
2. Sea ice (C₁)
3. Sea ice (C₁)
4. Sea ice (C₁)
5. Sea ice (C₁)
6. Sea ice (C₁)
7. Sea ice (C₁)
8. Sea ice (C₁)
9. Sea ice (C₁)
10. Sea ice (C₁)

SYMBOLS FOR ANALYSIS
C = Concentration of ice (C₁)
S = Sea ice
T = Thickness
U = Underfoot
V = Visibility
W = Wind
X = Other
Y = Other
Z = Other

EXAMPLES OF DEVELOPMENT (THICKNESS)
1. Sea ice (C₁)
2. Sea ice (C₁)
3. Sea ice (C₁)
4. Sea ice (C₁)
5. Sea ice (C₁)
6. Sea ice (C₁)
7. Sea ice (C₁)
8. Sea ice (C₁)
9. Sea ice (C₁)
10. Sea ice (C₁)

SYMBOLS FOR ANALYSIS
C = Concentration of ice (C₁)
S = Sea ice
T = Thickness
U = Underfoot
V = Visibility
W = Wind
X = Other
Y = Other
Z = Other

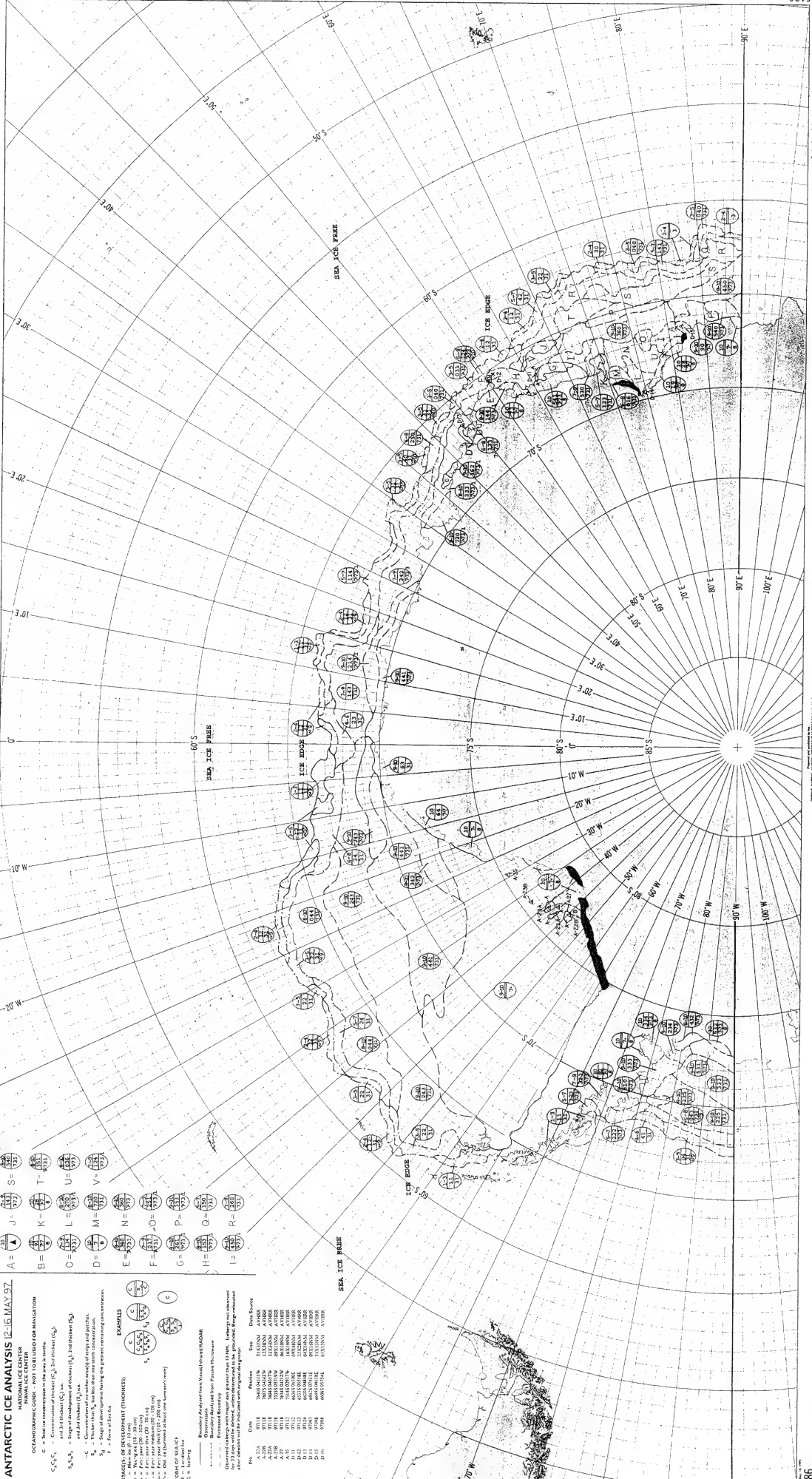
EXAMPLES OF DEVELOPMENT (THICKNESS)
1. Sea ice (C₁)
2. Sea ice (C₁)
3. Sea ice (C₁)
4. Sea ice (C₁)
5. Sea ice (C₁)
6. Sea ice (C₁)
7. Sea ice (C₁)
8. Sea ice (C₁)
9. Sea ice (C₁)
10. Sea ice (C₁)

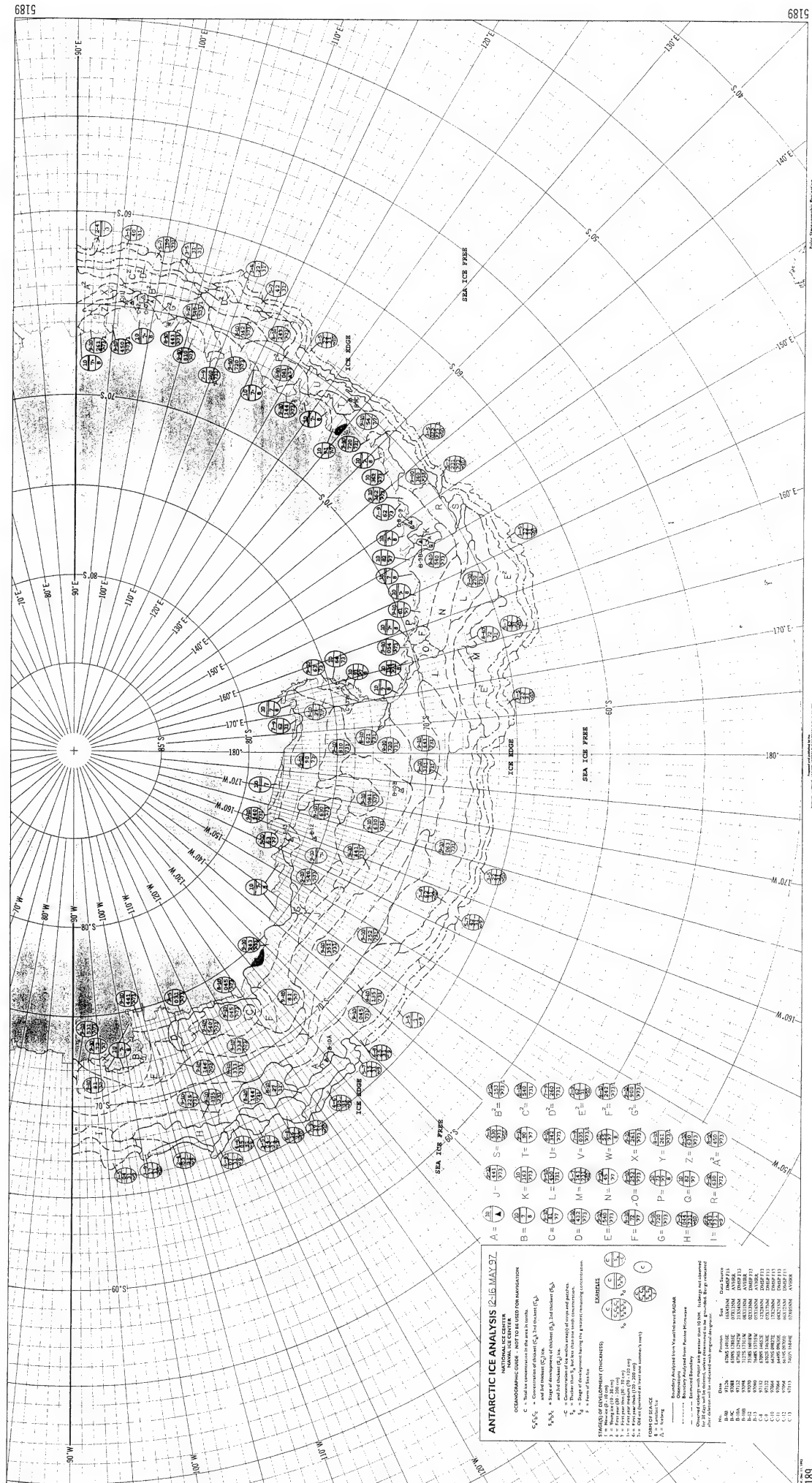
SYMBOLS FOR ANALYSIS
C = Concentration of ice (C₁)
S = Sea ice
T = Thickness
U = Underfoot
V = Visibility
W = Wind
X = Other
Y = Other
Z = Other

EXAMPLES OF DEVELOPMENT (THICKNESS)
1. Sea ice (C₁)
2. Sea ice (C₁)
3. Sea ice (C₁)
4. Sea ice (C₁)
5. Sea ice (C₁)
6. Sea ice (C₁)
7. Sea ice (C₁)
8. Sea ice (C₁)
9. Sea ice (C₁)
10. Sea ice (C₁)

SYMBOLS FOR ANALYSIS
C = Concentration of ice (C₁)
S = Sea ice
T = Thickness
U = Underfoot
V = Visibility
W = Wind
X = Other
Y = Other
Z = Other

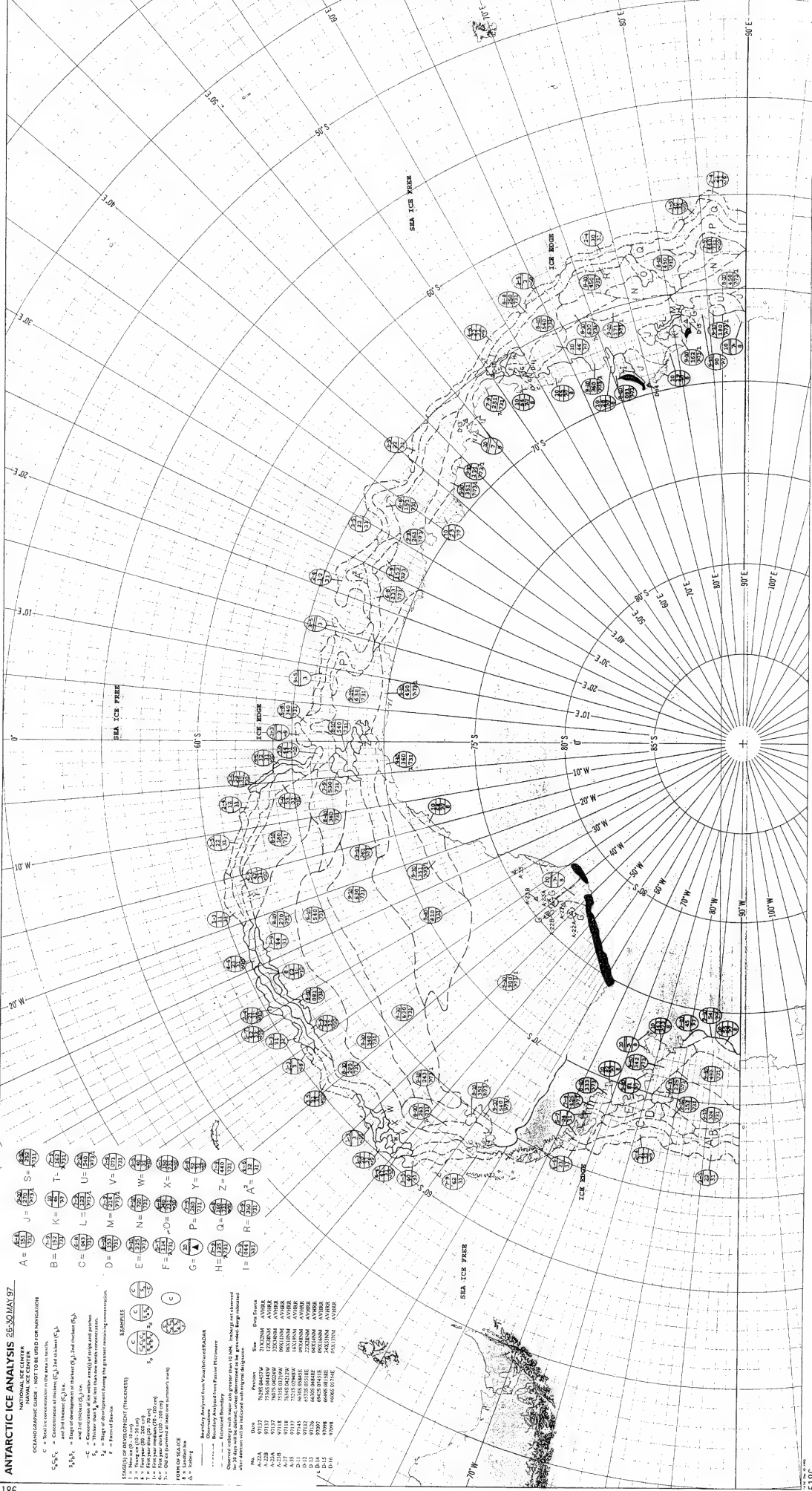
EXAMPLES OF DEVELOPMENT (THICKNESS)
1. Sea ice (C₁)
2. Sea ice (C₁)
3. Sea ice (C₁)
4. Sea ice (C₁)
5. Sea ice (C₁)
6. Sea ice (C₁)
7. Sea ice (C₁)
8. Sea ice (C₁)
9. Sea ice (C₁)
10. Sea ice (C₁)











ANTARCTIC ICE ANALYSIS 25-30 MAY 97

NATIONAL ICE CENTER

OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION

SYMBOLS

Ice Extent

Ice Thickness

Ice Movement

Ice Boundaries

Ice Data

Ice Age

Ice Type

Ice Color

Ice Shape

Ice Size

Ice Location

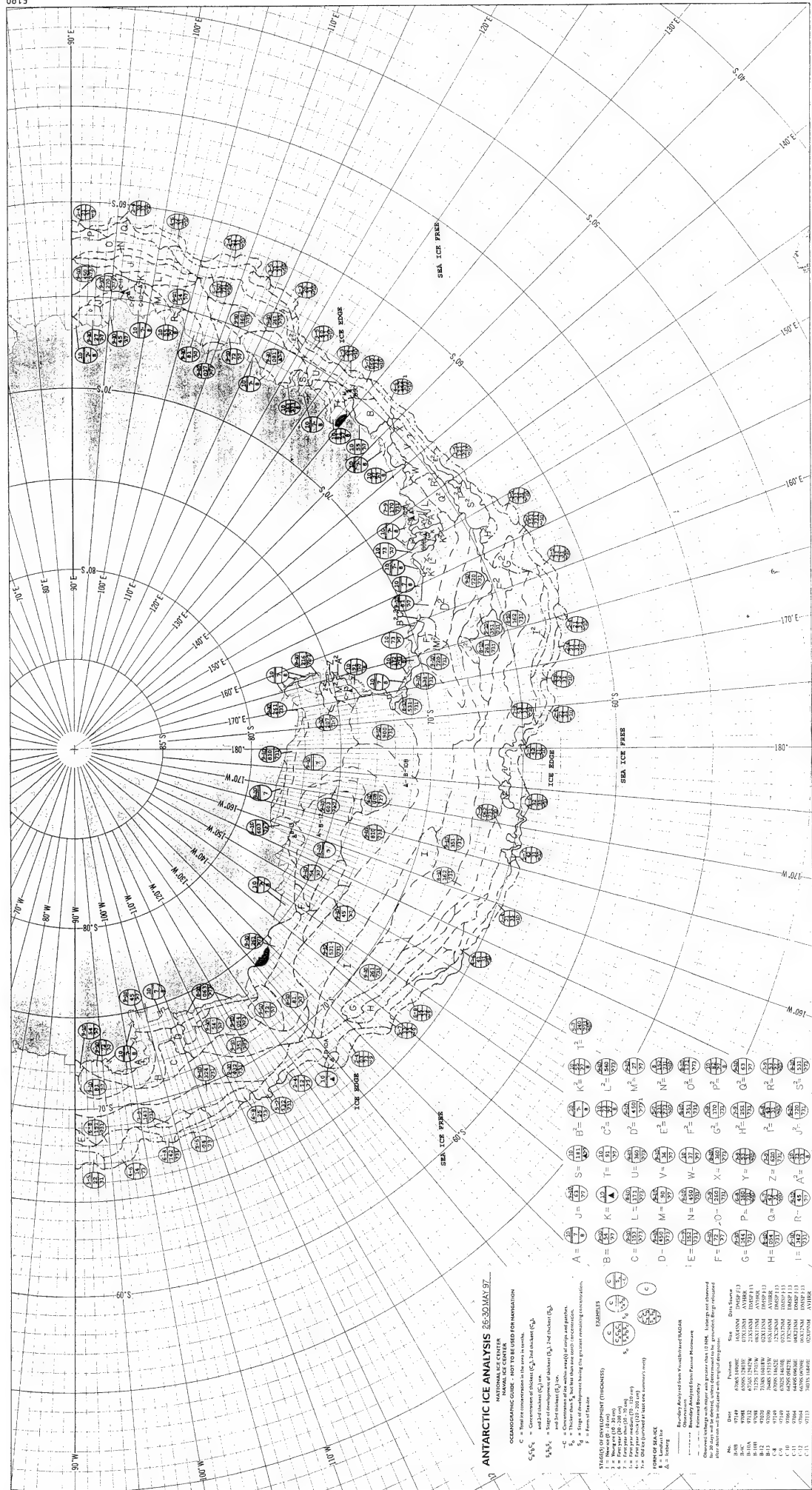
Ice Date

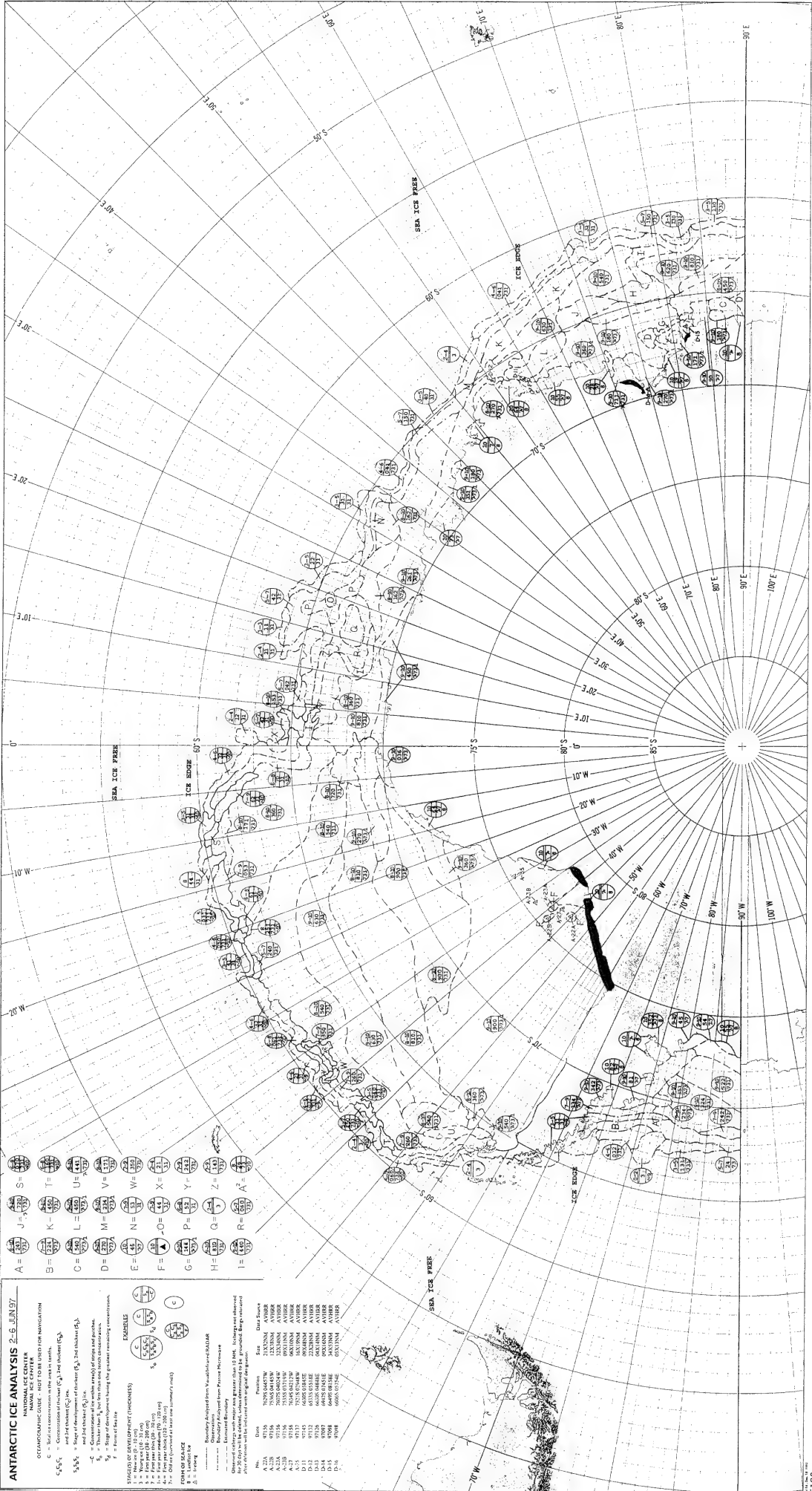
Ice Time

Ice Source

Ice Notes

Projection: Polar Stereographic
Scale: 1:10,000,000
Datum: Antarctic 1960
Units: Meters





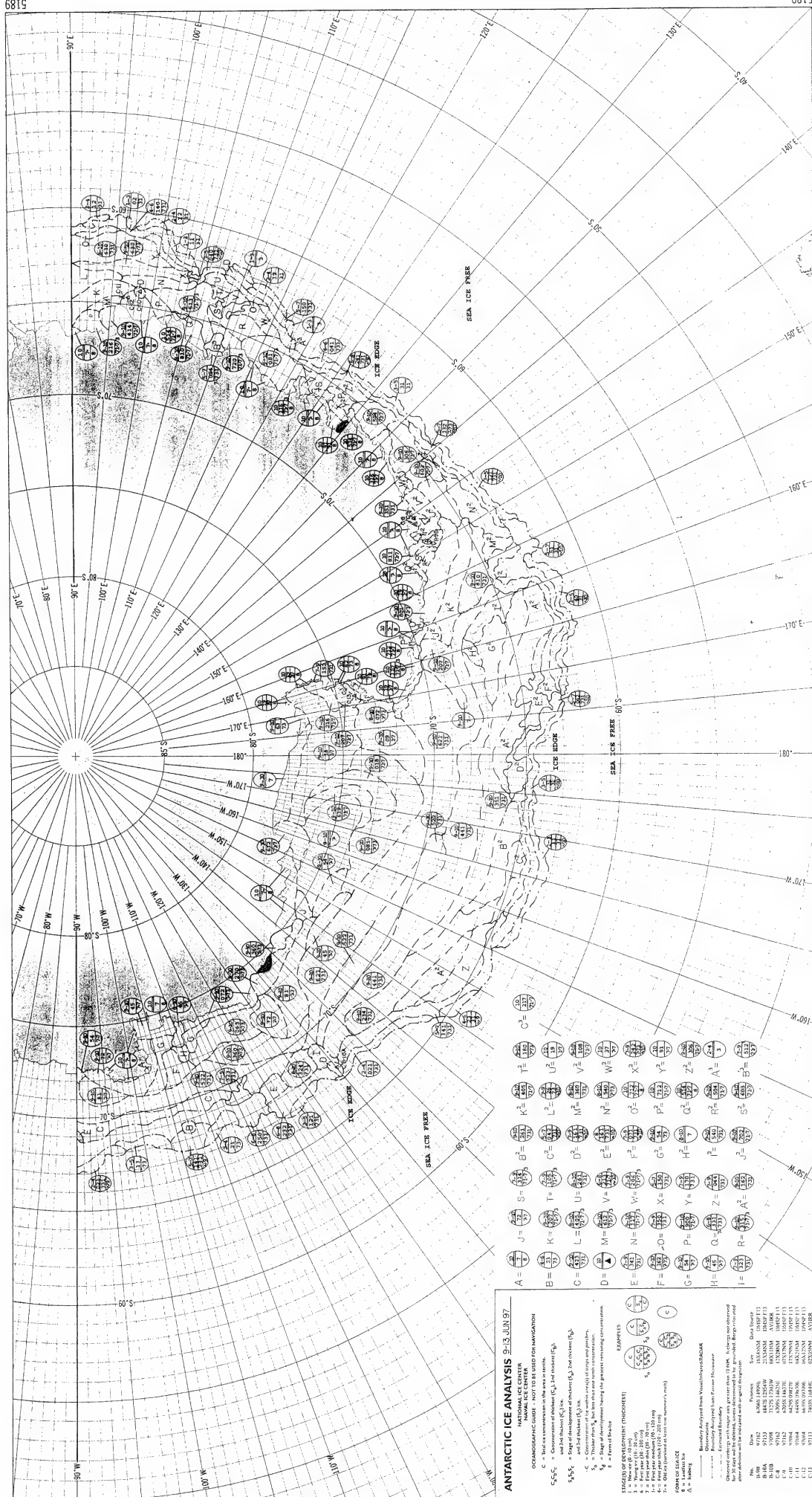
ANTARCTIC ICE ANALYSIS 2-6 JUN 57
NATIONAL ICE CENTER
ANTARCTIC ICE ANALYSIS 2-6 JUN 57
C = Total ice concentration in the area in tenths.
C₁ = Concentration of thick ice (C₁ > 10).
C₂ = Concentration of thin ice (C₂ < 10).
C₃ = Concentration of ice within 1000 ft of edge and pressure.
C₄ = Concentration of ice within 1000 ft of edge and pressure.
C₅ = Stage of development having the greatest remaining concentration.
C₆ = Form of ice floe.

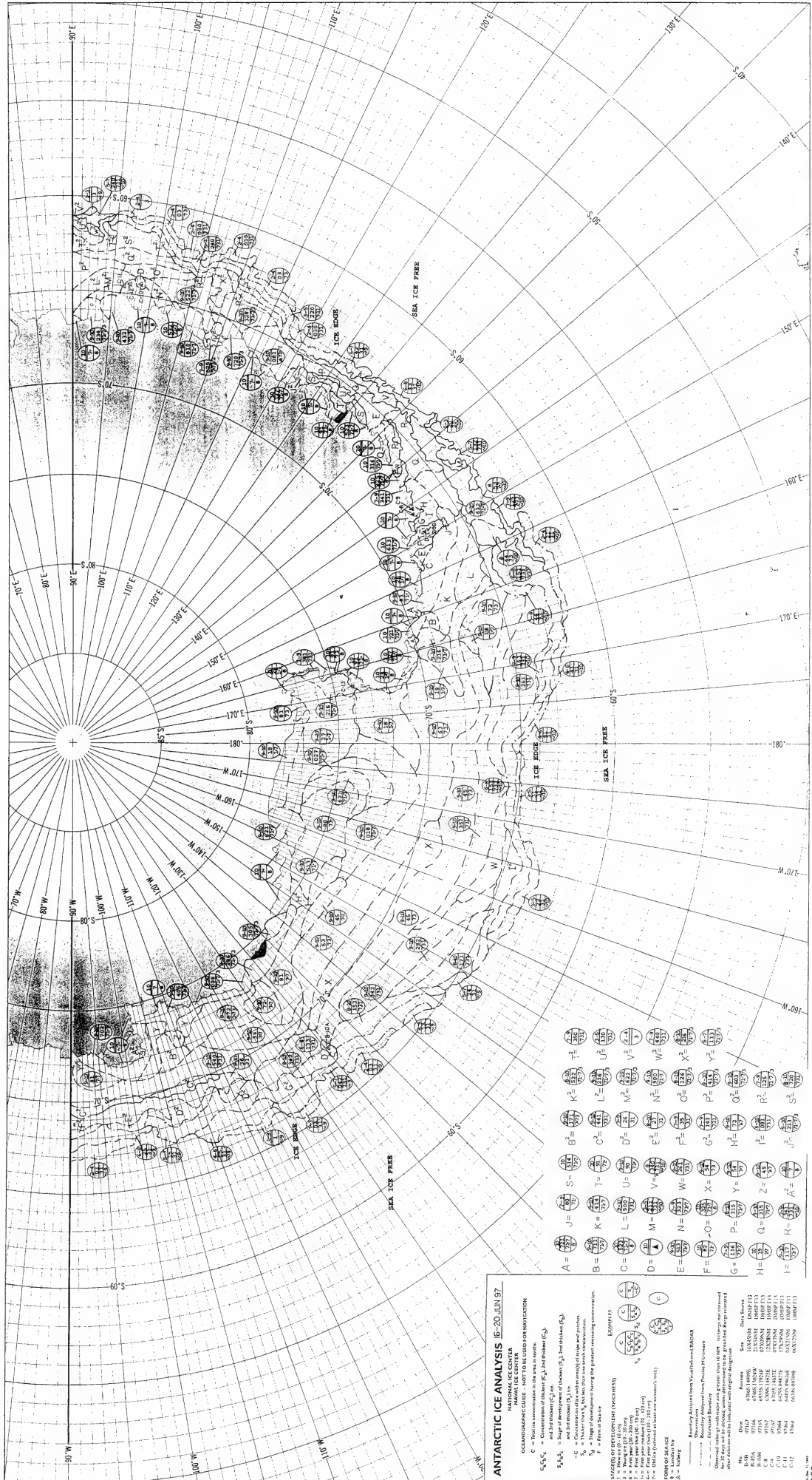
EXAMPLES

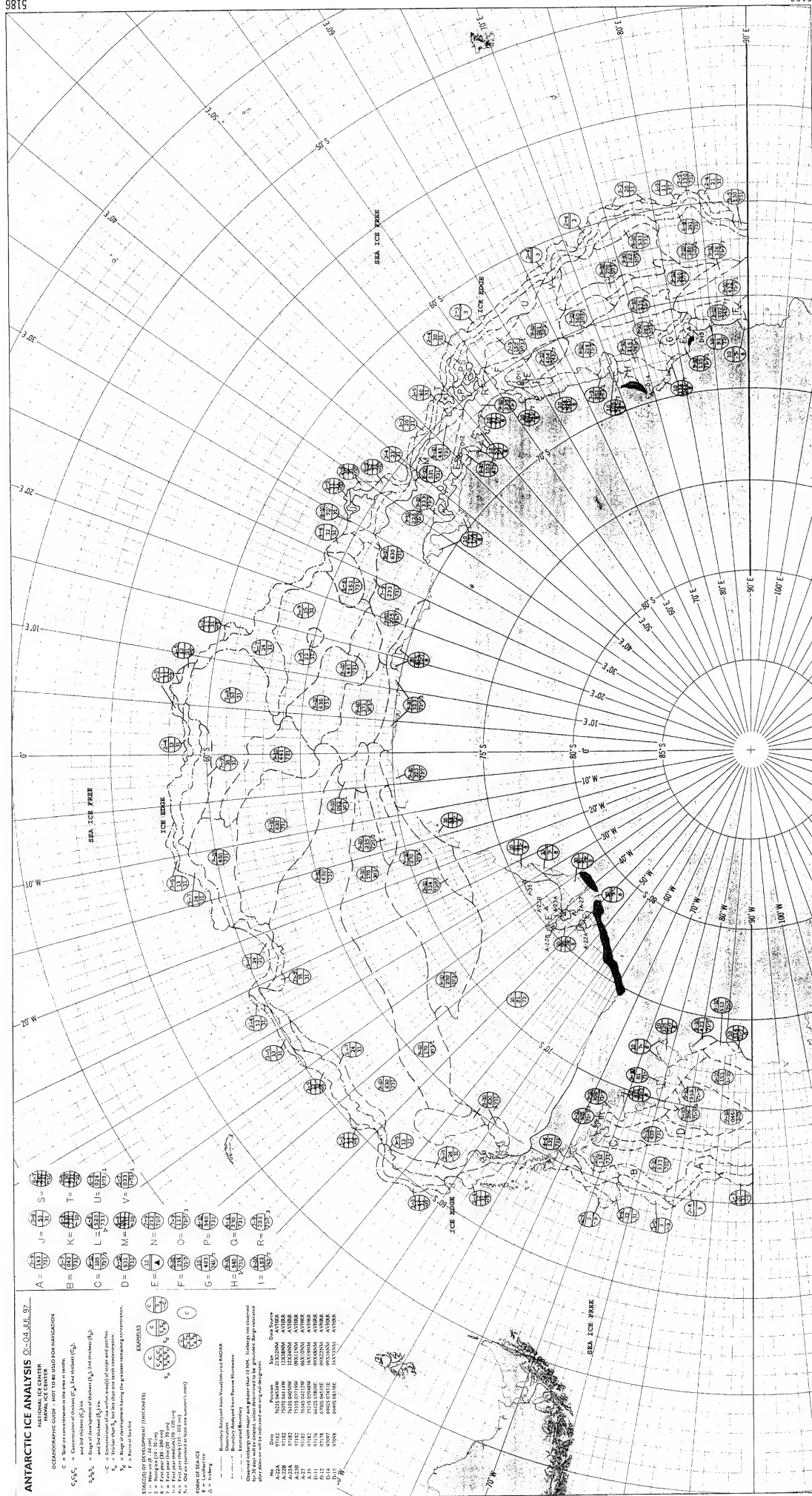
STAGES OF DEVELOPMENT (HICKMAN)

1 = Young ice (10-15 mi)
2 = First year ice (15-30 mi)
3 = Second year ice (30-60 mi)
4 = Third year ice (60-100 mi)
5 = Fourth year ice (100-150 mi)
6 = Fifth year ice (150-200 mi)
7 = Sixth year ice (200-250 mi)
8 = Seventh year ice (250-300 mi)
9 = Eighth year ice (300-350 mi)
10 = Ninth year ice (350-400 mi)
11 = Tenth year ice (400-450 mi)
12 = Eleventh year ice (450-500 mi)
13 = Twelfth year ice (500-550 mi)
14 = Thirteenth year ice (550-600 mi)
15 = Fourteenth year ice (600-650 mi)
16 = Fifteenth year ice (650-700 mi)
17 = Sixteenth year ice (700-750 mi)
18 = Seventeenth year ice (750-800 mi)
19 = Eighteenth year ice (800-850 mi)
20 = Nineteenth year ice (850-900 mi)
21 = Twentieth year ice (900-950 mi)
22 = Twenty-first year ice (950-1000 mi)
23 = Twenty-second year ice (1000-1050 mi)
24 = Twenty-third year ice (1050-1100 mi)
25 = Twenty-fourth year ice (1100-1150 mi)
26 = Twenty-fifth year ice (1150-1200 mi)
27 = Twenty-sixth year ice (1200-1250 mi)
28 = Twenty-seventh year ice (1250-1300 mi)
29 = Twenty-eighth year ice (1300-1350 mi)
30 = Twenty-ninth year ice (1350-1400 mi)
31 = Thirtieth year ice (1400-1450 mi)
32 = Thirty-first year ice (1450-1500 mi)
33 = Thirty-second year ice (1500-1550 mi)
34 = Thirty-third year ice (1550-1600 mi)
35 = Thirty-fourth year ice (1600-1650 mi)
36 = Thirty-fifth year ice (1650-1700 mi)
37 = Thirty-sixth year ice (1700-1750 mi)
38 = Thirty-seventh year ice (1750-1800 mi)
39 = Thirty-eighth year ice (1800-1850 mi)
40 = Thirty-ninth year ice (1850-1900 mi)
41 = Fortieth year ice (1900-1950 mi)
42 = Forty-first year ice (1950-2000 mi)
43 = Forty-second year ice (2000-2050 mi)
44 = Forty-third year ice (2050-2100 mi)
45 = Forty-fourth year ice (2100-2150 mi)
46 = Forty-fifth year ice (2150-2200 mi)
47 = Forty-sixth year ice (2200-2250 mi)
48 = Forty-seventh year ice (2250-2300 mi)
49 = Forty-eighth year ice (2300-2350 mi)
50 = Forty-ninth year ice (2350-2400 mi)
51 = Fiftieth year ice (2400-2450 mi)
52 = Fifty-first year ice (2450-2500 mi)
53 = Fifty-second year ice (2500-2550 mi)
54 = Fifty-third year ice (2550-2600 mi)
55 = Fifty-fourth year ice (2600-2650 mi)
56 = Fifty-fifth year ice (2650-2700 mi)
57 = Fifty-sixth year ice (2700-2750 mi)
58 = Fifty-seventh year ice (2750-2800 mi)
59 = Fifty-eighth year ice (2800-2850 mi)
60 = Fifty-ninth year ice (2850-2900 mi)
61 = Sixtieth year ice (2900-2950 mi)
62 = Sixty-first year ice (2950-3000 mi)
63 = Sixty-second year ice (3000-3050 mi)
64 = Sixty-third year ice (3050-3100 mi)
65 = Sixty-fourth year ice (3100-3150 mi)
66 = Sixty-fifth year ice (3150-3200 mi)
67 = Sixty-sixth year ice (3200-3250 mi)
68 = Sixty-seventh year ice (3250-3300 mi)
69 = Sixty-eighth year ice (3300-3350 mi)
70 = Sixty-ninth year ice (3350-3400 mi)
71 = Seventieth year ice (3400-3450 mi)
72 = Seventy-first year ice (3450-3500 mi)
73 = Seventy-second year ice (3500-3550 mi)
74 = Seventy-third year ice (3550-3600 mi)
75 = Seventy-fourth year ice (3600-3650 mi)
76 = Seventy-fifth year ice (3650-3700 mi)
77 = Seventy-sixth year ice (3700-3750 mi)
78 = Seventy-seventh year ice (3750-3800 mi)
79 = Seventy-eighth year ice (3800-3850 mi)
80 = Seventy-ninth year ice (3850-3900 mi)
81 = Eightieth year ice (3900-3950 mi)
82 = Eighty-first year ice (3950-4000 mi)
83 = Eighty-second year ice (4000-4050 mi)
84 = Eighty-third year ice (4050-4100 mi)
85 = Eighty-fourth year ice (4100-4150 mi)
86 = Eighty-fifth year ice (4150-4200 mi)
87 = Eighty-sixth year ice (4200-4250 mi)
88 = Eighty-seventh year ice (4250-4300 mi)
89 = Eighty-eighth year ice (4300-4350 mi)
90 = Eighty-ninth year ice (4350-4400 mi)
91 = Ninetieth year ice (4400-4450 mi)
92 = Ninety-first year ice (4450-4500 mi)
93 = Ninety-second year ice (4500-4550 mi)
94 = Ninety-third year ice (4550-4600 mi)
95 = Ninety-fourth year ice (4600-4650 mi)
96 = Ninety-fifth year ice (4650-4700 mi)
97 = Ninety-sixth year ice (4700-4750 mi)
98 = Ninety-seventh year ice (4750-4800 mi)
99 = Ninety-eighth year ice (4800-4850 mi)
100 = Ninety-ninth year ice (4850-4900 mi)
101 = One hundred year ice (4900-4950 mi)
102 = One hundred and first year ice (4950-5000 mi)
103 = One hundred and second year ice (5000-5050 mi)
104 = One hundred and third year ice (5050-5100 mi)
105 = One hundred and fourth year ice (5100-5150 mi)
106 = One hundred and fifth year ice (5150-5200 mi)
107 = One hundred and sixth year ice (5200-5250 mi)
108 = One hundred and seventh year ice (5250-5300 mi)
109 = One hundred and eighth year ice (5300-5350 mi)
110 = One hundred and ninth year ice (5350-5400 mi)
111 = One hundred and tenth year ice (5400-5450 mi)
112 = One hundred and eleventh year ice (5450-5500 mi)
113 = One hundred and twelfth year ice (5500-5550 mi)
114 = One hundred and thirteenth year ice (5550-5600 mi)
115 = One hundred and fourteenth year ice (5600-5650 mi)
116 = One hundred and fifteenth year ice (5650-5700 mi)
117 = One hundred and sixteenth year ice (5700-5750 mi)
118 = One hundred and seventeenth year ice (5750-5800 mi)
119 = One hundred and eighteenth year ice (5800-5850 mi)
120 = One hundred and nineteenth year ice (5850-5900 mi)
121 = One hundred and twentieth year ice (5900-5950 mi)
122 = One hundred and twenty-first year ice (5950-6000 mi)
123 = One hundred and twenty-second year ice (6000-6050 mi)
124 = One hundred and twenty-third year ice (6050-6100 mi)
125 = One hundred and twenty-fourth year ice (6100-6150 mi)
126 = One hundred and twenty-fifth year ice (6150-6200 mi)
127 = One hundred and twenty-sixth year ice (6200-6250 mi)
128 = One hundred and twenty-seventh year ice (6250-6300 mi)
129 = One hundred and twenty-eighth year ice (6300-6350 mi)
130 = One hundred and twenty-ninth year ice (6350-6400 mi)
131 = One hundred and thirtieth year ice (6400-6450 mi)
132 = One hundred and thirty-first year ice (6450-6500 mi)
133 = One hundred and thirty-second year ice (6500-6550 mi)
134 = One hundred and thirty-third year ice (6550-6600 mi)
135 = One hundred and thirty-fourth year ice (6600-6650 mi)
136 = One hundred and thirty-fifth year ice (6650-6700 mi)
137 = One hundred and thirty-sixth year ice (6700-6750 mi)
138 = One hundred and thirty-seventh year ice (6750-6800 mi)
139 = One hundred and thirty-eighth year ice (6800-6850 mi)
140 = One hundred and thirty-ninth year ice (6850-6900 mi)
141 = One hundred and fortieth year ice (6900-6950 mi)
142 = One hundred and forty-first year ice (6950-7000 mi)
143 = One hundred and forty-second year ice (7000-7050 mi)
144 = One hundred and forty-third year ice (7050-7100 mi)
145 = One hundred and forty-fourth year ice (7100-7150 mi)
146 = One hundred and forty-fifth year ice (7150-7200 mi)
147 = One hundred and forty-sixth year ice (7200-7250 mi)
148 = One hundred and forty-seventh year ice (7250-7300 mi)
149 = One hundred and forty-eighth year ice (7300-7350 mi)
150 = One hundred and forty-ninth year ice (7350-7400 mi)
151 = One hundred and fiftieth year ice (7400-7450 mi)
152 = One hundred and fifty-first year ice (7450-7500 mi)
153 = One hundred and fifty-second year ice (7500-7550 mi)
154 = One hundred and fifty-third year ice (7550-7600 mi)
155 = One hundred and fifty-fourth year ice (7600-7650 mi)
156 = One hundred and fifty-fifth year ice (7650-7700 mi)
157 = One hundred and fifty-sixth year ice (7700-7750 mi)
158 = One hundred and fifty-seventh year ice (7750-7800 mi)
159 = One hundred and fifty-eighth year ice (7800-7850 mi)
160 = One hundred and fifty-ninth year ice (7850-7900 mi)
161 = One hundred and sixtieth year ice (7900-7950 mi)
162 = One hundred and sixty-first year ice (7950-8000 mi)
163 = One hundred and sixty-second year ice (8000-8050 mi)
164 = One hundred and sixty-third year ice (8050-8100 mi)
165 = One hundred and sixty-fourth year ice (8100-8150 mi)
166 = One hundred and sixty-fifth year ice (8150-8200 mi)
167 = One hundred and sixty-sixth year ice (8200-8250 mi)
168 = One hundred and sixty-seventh year ice (8250-8300 mi)
169 = One hundred and sixty-eighth year ice (8300-8350 mi)
170 = One hundred and sixty-ninth year ice (8350-8400 mi)
171 = One hundred and seventieth year ice (8400-8450 mi)
172 = One hundred and seventy-first year ice (8450-8500 mi)
173 = One hundred and seventy-second year ice (8500-8550 mi)
174 = One hundred and seventy-third year ice (8550-8600 mi)
175 = One hundred and seventy-fourth year ice (8600-8650 mi)
176 = One hundred and seventy-fifth year ice (8650-8700 mi)
177 = One hundred and seventy-sixth year ice (8700-8750 mi)
178 = One hundred and seventy-seventh year ice (8750-8800 mi)
179 = One hundred and seventy-eighth year ice (8800-8850 mi)
180 = One hundred and seventy-ninth year ice (8850-8900 mi)
181 = One hundred and eightieth year ice (8900-8950 mi)
182 = One hundred and eighty-first year ice (8950-9000 mi)
183 = One hundred and eighty-second year ice (9000-9050 mi)
184 = One hundred and eighty-third year ice (9050-9100 mi)
185 = One hundred and eighty-fourth year ice (9100-9150 mi)
186 = One hundred and eighty-fifth year ice (9150-9200 mi)
187 = One hundred and eighty-sixth year ice (9200-9250 mi)
188 = One hundred and eighty-seventh year ice (9250-9300 mi)
189 = One hundred and eighty-eighth year ice (9300-9350 mi)
190 = One hundred and eighty-ninth year ice (9350-9400 mi)
191 = One hundred and ninetieth year ice (9400-9450 mi)
192 = One hundred and ninety-first year ice (9450-9500 mi)
193 = One hundred and ninety-second year ice (9500-9550 mi)
194 = One hundred and ninety-third year ice (9550-9600 mi)
195 = One hundred and ninety-fourth year ice (9600-9650 mi)
196 = One hundred and ninety-fifth year ice (9650-9700 mi)
197 = One hundred and ninety-sixth year ice (9700-9750 mi)
198 = One hundred and ninety-seventh year ice (9750-9800 mi)
199 = One hundred and ninety-eighth year ice (9800-9850 mi)
200 = One hundred and ninety-ninth year ice (9850-9900 mi)
201 = Two hundred year ice (9900-9950 mi)
202 = Two hundred and first year ice (9950-10000 mi)









on - Polar Stereographic.

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ANTARCTIC ICE ANALYSIS 01-04 JUL 97

NATIONAL ICE CENTER
NAVAL ICE CENTER
OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION

C = Total ice concentration in the area in tenths.
 C_8, C_9, C_c = Concentration of thickest (C_8), 2nd thickest (C_9), and 3rd thickest (C_c) ice.

$S_8 S_9 S_C$ = Stage of development of thickest (S_8), 2nd thickest (S_9) and 3rd thickest (S_C) ice
-C = Concentration of ice within areas of strips and patches

S_0 = Thicker than S_B but less than one tenth concentration.
 S_D = Stage of development having the greatest remaining concentration.
 F = Form of Sealite

EXAMPLES

STAGE(S) OF DEVELOPMENT (THICKNESS)

- New ice (0 - 10 cm)
- Young ice (10 - 30 cm)

- First year (30 - 200 cm)
- First year (thin) (30 - 70 cm)
- First year medium (70 - 120 cm)
- First year thick (120 - 260 cm)

... = Old ice (survived at least one summer's melt);

Boundary Analysed from Visual Infrared RADAR Observations

Estimated Boundary

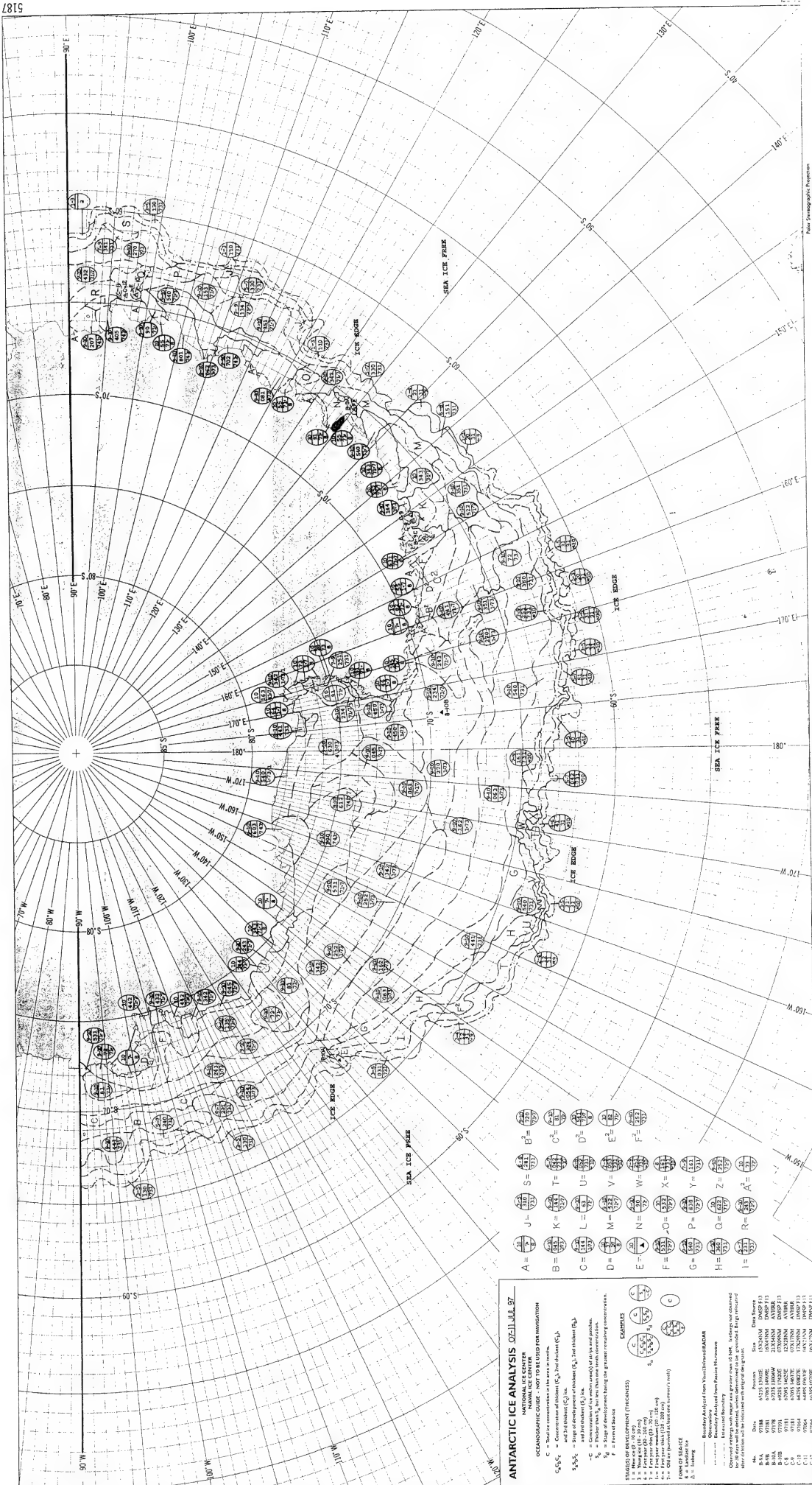
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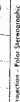
BL-9B	97181	67005 14009E	16X45NM	DMSP F11
B-10A	97178	67275 13004W	21X54NM	A17GR
B-15B	97165	69555 17924E	07X09NM	DMSP F11

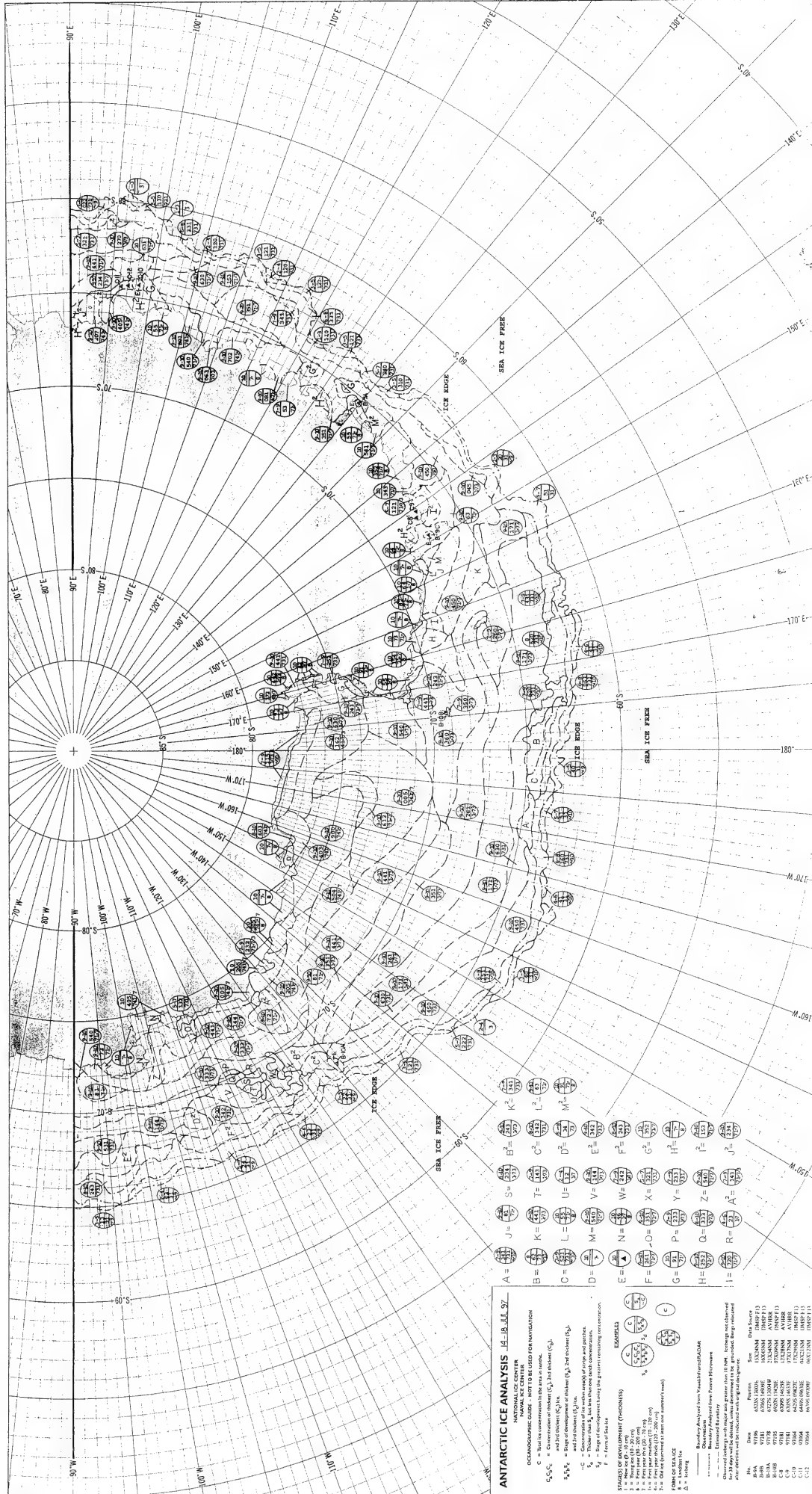
C-8	0.7055	0.4632E	12X28S30	AV100K
C-9	0.7181	0.7055	14632E	07X179NM
C-10	0.7064	0.6298	09832E	17X29NM
C-11	0.7064	0.6495	09620E	04X211NM
				DMSF F13
				DMSF F13

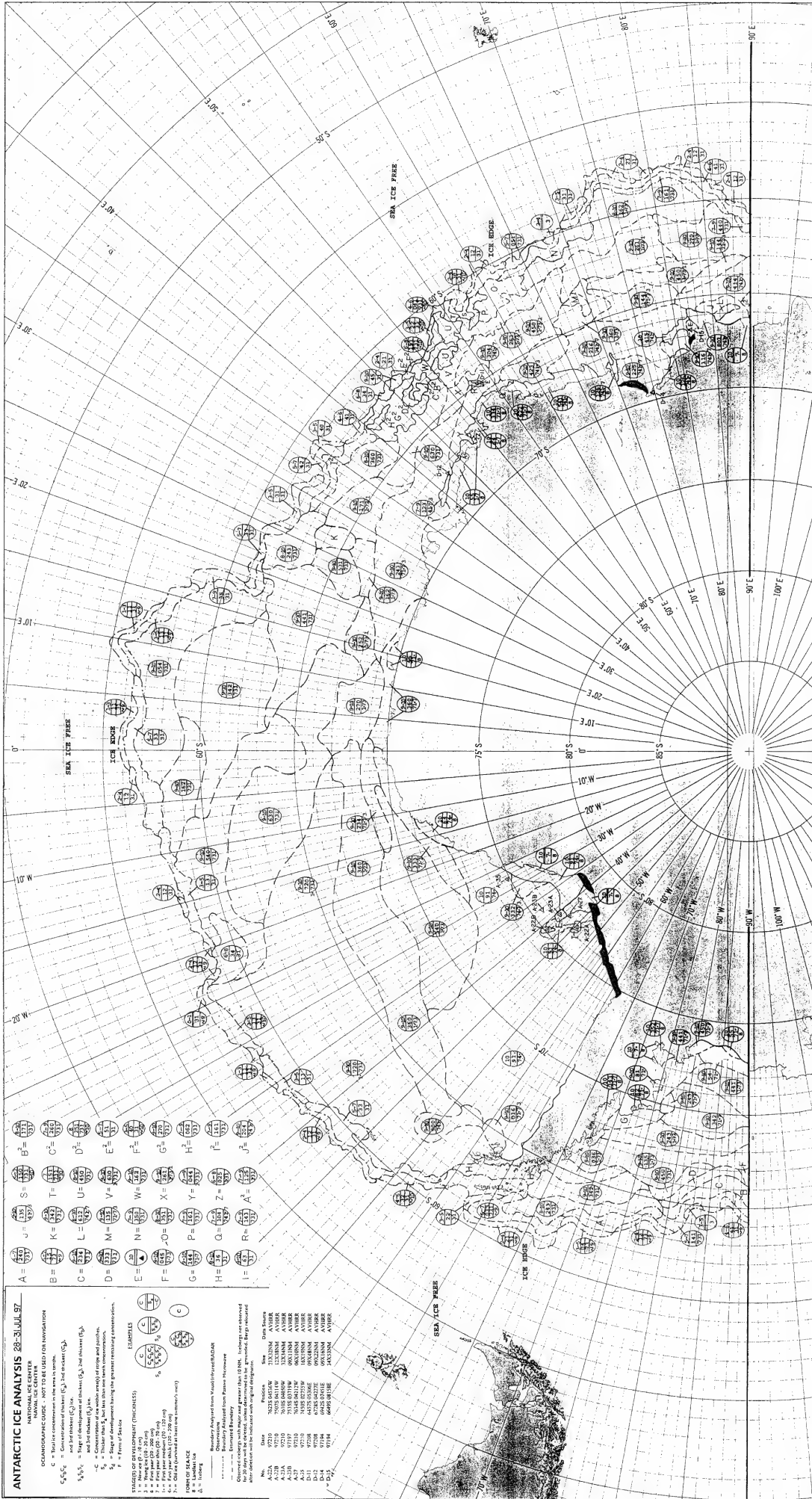
187
J. Chem. Phys. 1993
66:195-197 (1993)
0021-9758/93/060187-03\$04.50/0
DOI: 10.1063/1.456666

5187









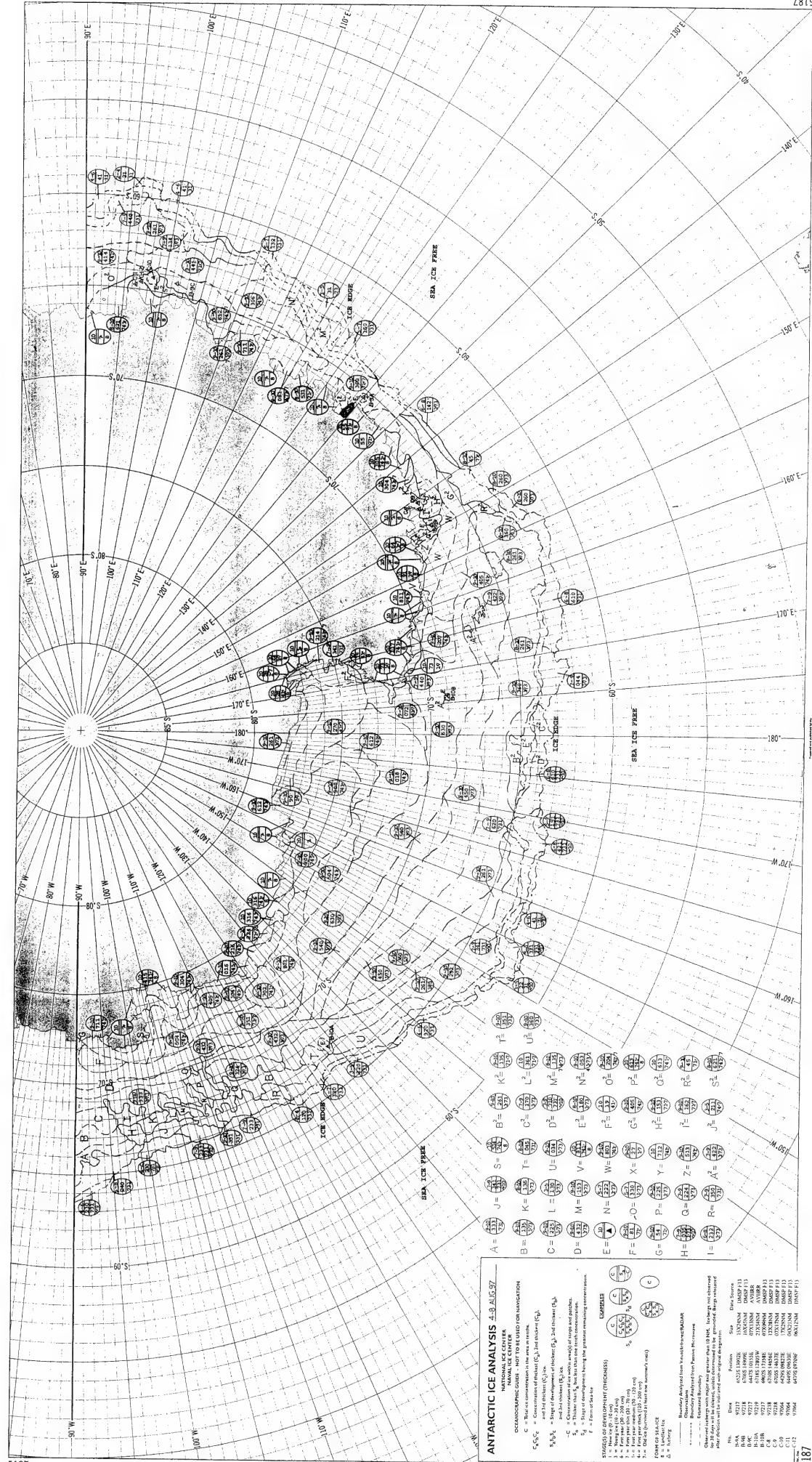
Projection - Polar Stereographic

Prepared and submitted by the
U.S. District Court, District of Columbia

519C







ANTARCTIC ICE ANALYSIS 1-8 AUG 57

NATIONAL ICE CENTER

OCCUPANCY MAP FOR NAVIGATION

C = Total ice concentration in the area in percent

$C_{1/2}$ = Concentration of ice (1/2) in the area in percent

$C_{1/4}$ = Concentration of ice (1/4) in the area in percent

$C_{1/8}$ = Concentration of ice (1/8) in the area in percent

$C_{1/16}$ = Concentration of ice (1/16) in the area in percent

$C_{1/32}$ = Concentration of ice (1/32) in the area in percent

$C_{1/64}$ = Concentration of ice (1/64) in the area in percent

$C_{1/128}$ = Concentration of ice (1/128) in the area in percent

$C_{1/256}$ = Concentration of ice (1/256) in the area in percent

$C_{1/512}$ = Concentration of ice (1/512) in the area in percent

$C_{1/1024}$ = Concentration of ice (1/1024) in the area in percent

$C_{1/2048}$ = Concentration of ice (1/2048) in the area in percent

$C_{1/4096}$ = Concentration of ice (1/4096) in the area in percent

$C_{1/8192}$ = Concentration of ice (1/8192) in the area in percent

$C_{1/16384}$ = Concentration of ice (1/16384) in the area in percent

$C_{1/32768}$ = Concentration of ice (1/32768) in the area in percent

$C_{1/65536}$ = Concentration of ice (1/65536) in the area in percent

$C_{1/131072}$ = Concentration of ice (1/131072) in the area in percent

$C_{1/262144}$ = Concentration of ice (1/262144) in the area in percent

$C_{1/524288}$ = Concentration of ice (1/524288) in the area in percent

$C_{1/1048576}$ = Concentration of ice (1/1048576) in the area in percent

$C_{1/2097152}$ = Concentration of ice (1/2097152) in the area in percent

$C_{1/4194304}$ = Concentration of ice (1/4194304) in the area in percent

$C_{1/8388608}$ = Concentration of ice (1/8388608) in the area in percent

$C_{1/16777216}$ = Concentration of ice (1/16777216) in the area in percent

$C_{1/33554432}$ = Concentration of ice (1/33554432) in the area in percent

$C_{1/67108864}$ = Concentration of ice (1/67108864) in the area in percent

$C_{1/134217728}$ = Concentration of ice (1/134217728) in the area in percent

$C_{1/268435456}$ = Concentration of ice (1/268435456) in the area in percent

$C_{1/536870912}$ = Concentration of ice (1/536870912) in the area in percent

$C_{1/1073741824}$ = Concentration of ice (1/1073741824) in the area in percent

$C_{1/2147483648}$ = Concentration of ice (1/2147483648) in the area in percent

$C_{1/4294967296}$ = Concentration of ice (1/4294967296) in the area in percent

$C_{1/8589934592}$ = Concentration of ice (1/8589934592) in the area in percent

$C_{1/17179869184}$ = Concentration of ice (1/17179869184) in the area in percent

$C_{1/34359738368}$ = Concentration of ice (1/34359738368) in the area in percent

$C_{1/68719476736}$ = Concentration of ice (1/68719476736) in the area in percent

$C_{1/137438953472}$ = Concentration of ice (1/137438953472) in the area in percent

$C_{1/274877906944}$ = Concentration of ice (1/274877906944) in the area in percent

$C_{1/549755813888}$ = Concentration of ice (1/549755813888) in the area in percent

$C_{1/1099511627776}$ = Concentration of ice (1/1099511627776) in the area in percent

$C_{1/2199023255552}$ = Concentration of ice (1/2199023255552) in the area in percent

$C_{1/4398046511104}$ = Concentration of ice (1/4398046511104) in the area in percent

$C_{1/8796093022208}$ = Concentration of ice (1/8796093022208) in the area in percent

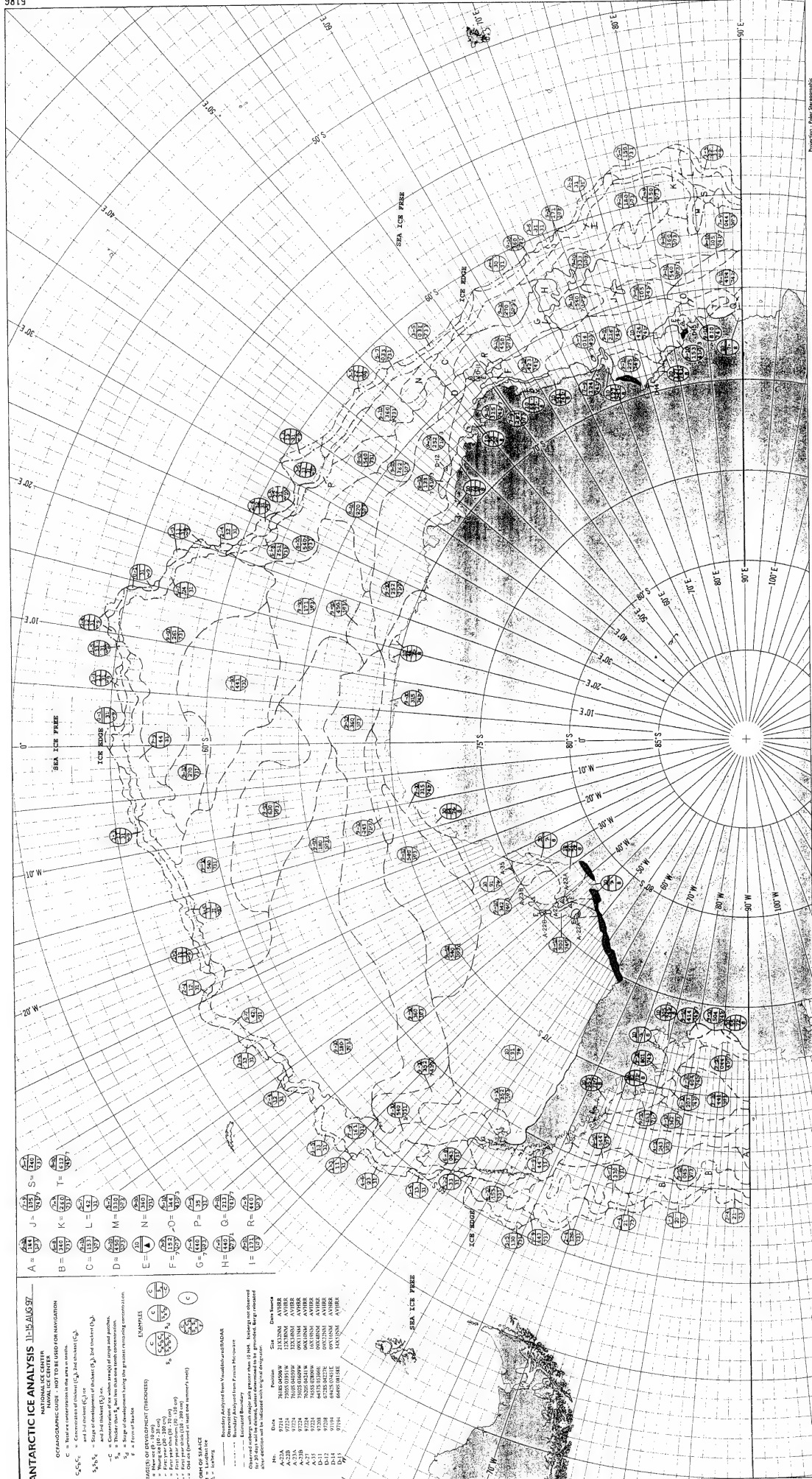
$C_{1/17592186044416}$ = Concentration of ice (1/17592186044416) in the area in percent

$C_{1/35184372088832}$ = Concentration of ice (1/35184372088832) in the area in percent

$C_{1/70368744177664}$ = Concentration of ice (1/70368744177664) in the area in percent

$C_{1/140737488355328}$ = Concentration of ice (1/140737488355328) in the area in percent

$C_{1/281474976710656}$ = Concentration of ice (1/281474976710656) in the area in percent



Projection: Polar Stereographic
Scale: 1:10,000,000

Source: National Oceanic and Atmospheric Administration
Date: 1/1/1980

ANTARCTIC ICE ANALYSIS 1-15-85

NATIONAL ICE CENTER
OPERATIONAL GUIDANCE - NOT FOR USE FOR NAVIGATION

SYMBOLS:

- A** = Iceberg (1000 ft or more in length)
- B** = Iceberg (500 to 999 ft in length)
- C** = Iceberg (250 to 499 ft in length)
- D** = Iceberg (100 to 249 ft in length)
- E** = Iceberg (50 to 99 ft in length)
- F** = Iceberg (25 to 49 ft in length)
- G** = Iceberg (10 to 24 ft in length)
- H** = Iceberg (5 to 9 ft in length)
- I** = Iceberg (less than 5 ft in length)
- J** = Iceberg (less than 5 ft in length)
- K** = Iceberg (less than 5 ft in length)
- L** = Iceberg (less than 5 ft in length)
- M** = Iceberg (less than 5 ft in length)
- N** = Iceberg (less than 5 ft in length)
- O** = Iceberg (less than 5 ft in length)
- P** = Iceberg (less than 5 ft in length)
- Q** = Iceberg (less than 5 ft in length)
- R** = Iceberg (less than 5 ft in length)

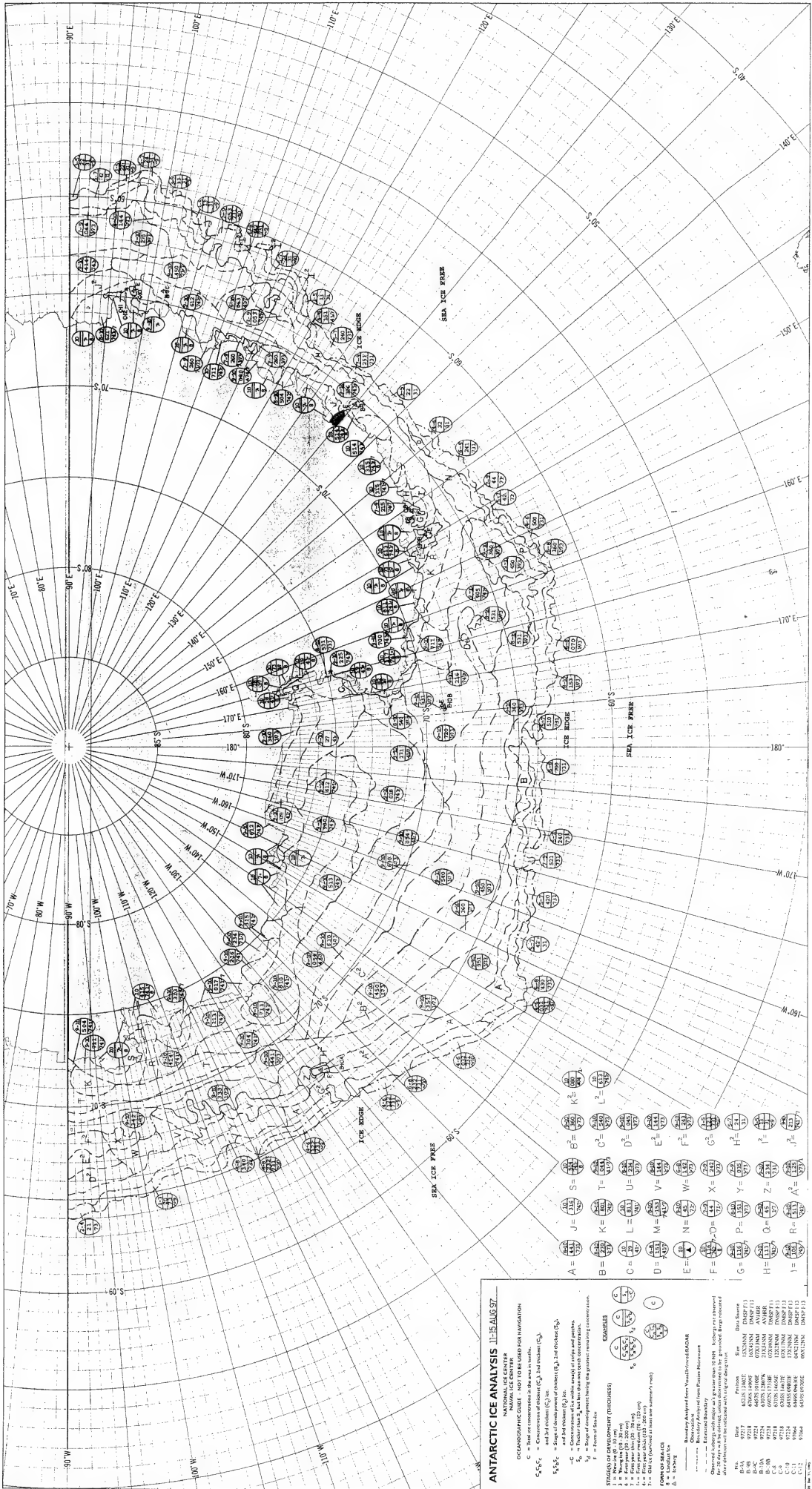
EXAMPLES:

SYMBOLS OF DEVELOPMENT (THICKNESS):

- S** = Sea ice (10 ft or more thick)
- T** = Thin ice (less than 10 ft thick)
- U** = Very thin ice (less than 1 ft thick)
- V** = Very thin ice (less than 1 ft thick)
- W** = Very thin ice (less than 1 ft thick)
- X** = Very thin ice (less than 1 ft thick)
- Y** = Very thin ice (less than 1 ft thick)
- Z** = Very thin ice (less than 1 ft thick)

NOTES:

- 1. This chart is based on data received from the National Ice Center.
- 2. The chart is not a navigational aid.
- 3. The chart is not a guarantee of accuracy.
- 4. The chart is not a guarantee of completeness.
- 5. The chart is not a guarantee of timeliness.
- 6. The chart is not a guarantee of reliability.
- 7. The chart is not a guarantee of validity.
- 8. The chart is not a guarantee of utility.
- 9. The chart is not a guarantee of value.
- 10. The chart is not a guarantee of use.



ANTARCTIC ICE ANALYSIS 11-15 AUG 57

NATIONAL ICE CENTER
NAVY, ICE CENTER
NAVY, ICE CENTER

ORGANIZATIONAL CHART FOR NAVIGATION

C = Total ice concentration in the area in north.

C₁, C₂, C₃ = Concentrations of ice in the area in north.

C₁, C₂, C₃ = Concentrations of ice in the area in north.

C₁, C₂, C₃ = Concentrations of ice in the area in north.

C₁, C₂, C₃ = Concentrations of ice in the area in north.

C₁, C₂, C₃ = Concentrations of ice in the area in north.

C₁, C₂, C₃ = Concentrations of ice in the area in north.

C₁, C₂, C₃ = Concentrations of ice in the area in north.

C₁, C₂, C₃ = Concentrations of ice in the area in north.

C₁, C₂, C₃ = Concentrations of ice in the area in north.

C₁, C₂, C₃ = Concentrations of ice in the area in north.

C₁, C₂, C₃ = Concentrations of ice in the area in north.

C₁, C₂, C₃ = Concentrations of ice in the area in north.

C₁, C₂, C₃ = Concentrations of ice in the area in north.

C₁, C₂, C₃ = Concentrations of ice in the area in north.

C₁, C₂, C₃ = Concentrations of ice in the area in north.

C₁, C₂, C₃ = Concentrations of ice in the area in north.

C₁, C₂, C₃ = Concentrations of ice in the area in north.

C₁, C₂, C₃ = Concentrations of ice in the area in north.

C₁, C₂, C₃ = Concentrations of ice in the area in north.

C₁, C₂, C₃ = Concentrations of ice in the area in north.

C₁, C₂, C₃ = Concentrations of ice in the area in north.

C₁, C₂, C₃ = Concentrations of ice in the area in north.

C₁, C₂, C₃ = Concentrations of ice in the area in north.

STANDARD OF DEVELOPMENT (TICOMS)

A = Worst ice (10-20 ft)

B = Worst ice (20-30 ft)

C = Worst ice (30-40 ft)

D = Worst ice (40-50 ft)

E = Worst ice (50-60 ft)

F = Worst ice (60-70 ft)

G = Worst ice (70-80 ft)

H = Worst ice (80-90 ft)

I = Worst ice (90-100 ft)

J = Worst ice (100-110 ft)

K = Worst ice (110-120 ft)

L = Worst ice (120-130 ft)

M = Worst ice (130-140 ft)

N = Worst ice (140-150 ft)

O = Worst ice (150-160 ft)

P = Worst ice (160-170 ft)

Q = Worst ice (170-180 ft)

R = Worst ice (180-190 ft)

S = Worst ice (190-200 ft)

T = Worst ice (200-210 ft)

U = Worst ice (210-220 ft)

V = Worst ice (220-230 ft)

W = Worst ice (230-240 ft)

X = Worst ice (240-250 ft)

Y = Worst ice (250-260 ft)

Z = Worst ice (260-270 ft)

FORM OF ANALYSIS

A = Analysis

B = Analysis

C = Analysis

D = Analysis

E = Analysis

F = Analysis

G = Analysis

H = Analysis

I = Analysis

J = Analysis

K = Analysis

L = Analysis

M = Analysis

N = Analysis

O = Analysis

P = Analysis

Q = Analysis

R = Analysis

S = Analysis

T = Analysis

U = Analysis

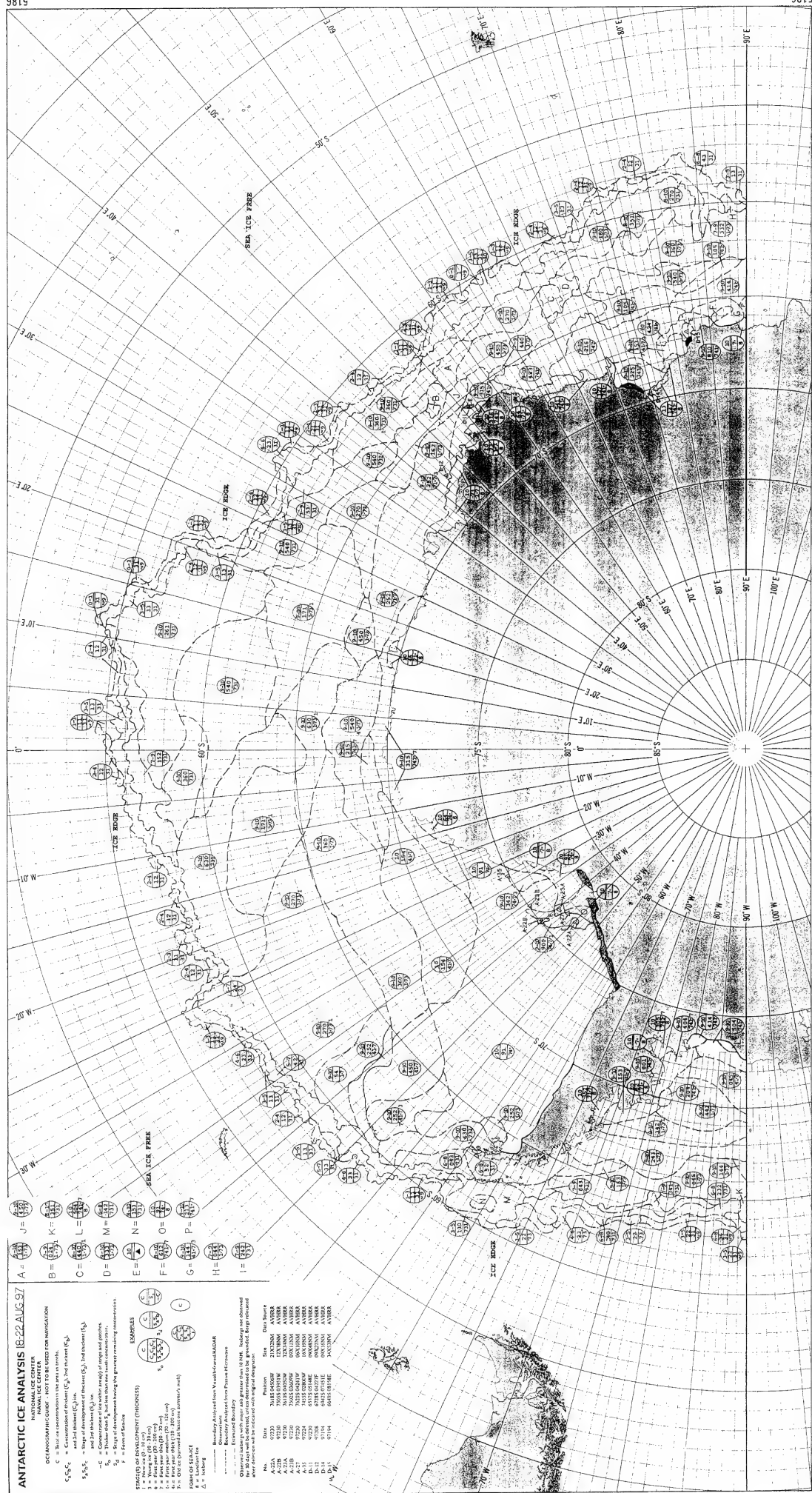
V = Analysis

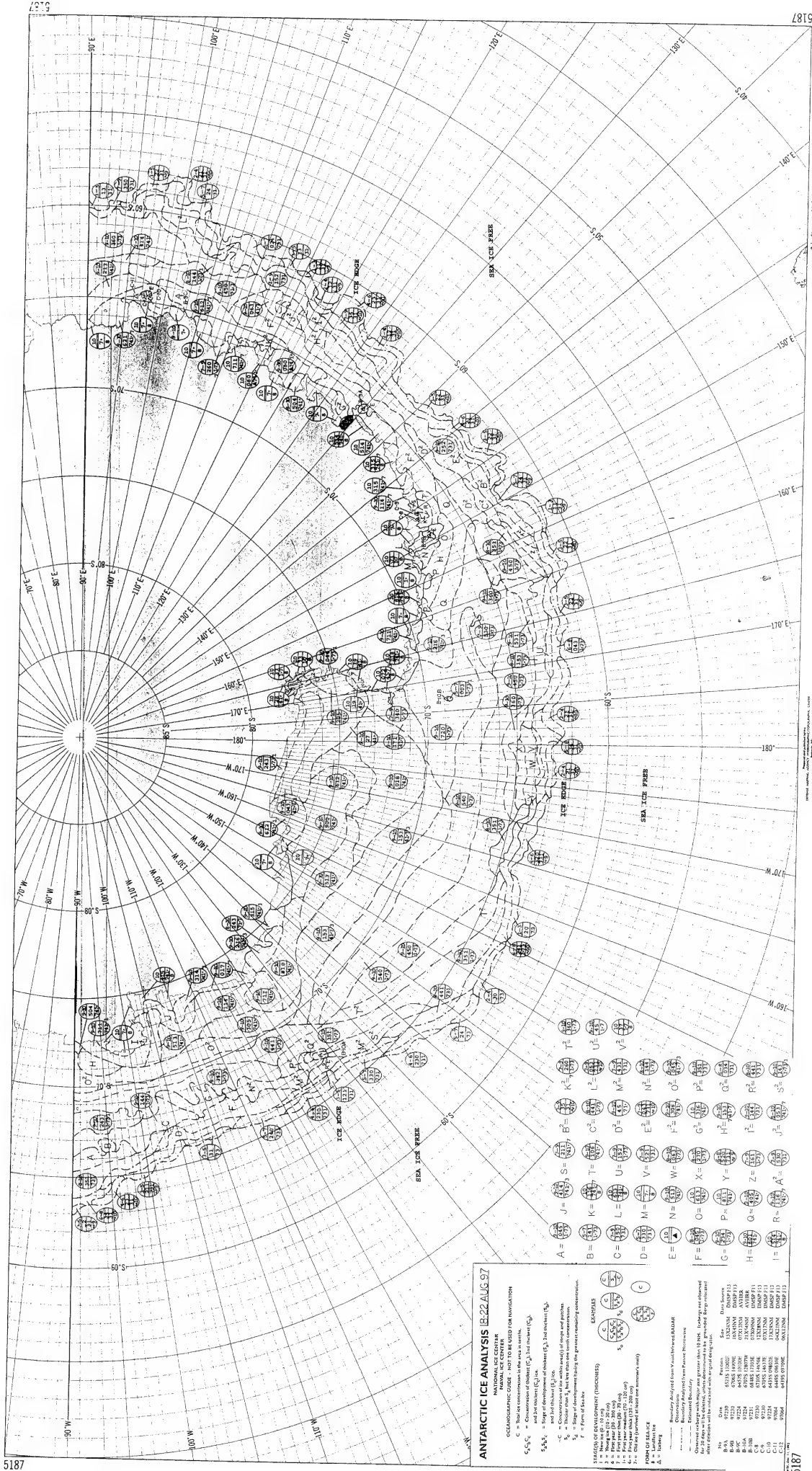
W = Analysis

X = Analysis

Y = Analysis

Z = Analysis





ANTARCTIC ICE ANALYSIS 22 AUG 97

NATIONAL ICE CENTER
OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION

C = Thin ice concentration in the area in units.

C₁C₂C₃ = Thin ice concentration in the area in units.

S₁S₂S₃ = Stage of development of ice (S₁, S₂, S₃).

and ice thickness (S₁, S₂, S₃).

S₁ = Thinner than S₂, but the same ice concentration.

S₂ = Thinner than S₃, but the same ice concentration.

S₃ = Thinner than S₄, but the same ice concentration.

S₄ = Thinner than S₅, but the same ice concentration.

S₅ = Thinner than S₆, but the same ice concentration.

S₆ = Thinner than S₇, but the same ice concentration.

S₇ = Thinner than S₈, but the same ice concentration.

S₈ = Thinner than S₉, but the same ice concentration.

S₉ = Thinner than S₁₀, but the same ice concentration.

S₁₀ = Thinner than S₁₁, but the same ice concentration.

S₁₁ = Thinner than S₁₂, but the same ice concentration.

S₁₂ = Thinner than S₁₃, but the same ice concentration.

S₁₃ = Thinner than S₁₄, but the same ice concentration.

S₁₄ = Thinner than S₁₅, but the same ice concentration.

S₁₅ = Thinner than S₁₆, but the same ice concentration.

S₁₆ = Thinner than S₁₇, but the same ice concentration.

S₁₇ = Thinner than S₁₈, but the same ice concentration.

S₁₈ = Thinner than S₁₉, but the same ice concentration.

S₁₉ = Thinner than S₂₀, but the same ice concentration.

S₂₀ = Thinner than S₂₁, but the same ice concentration.

S₂₁ = Thinner than S₂₂, but the same ice concentration.

S₂₂ = Thinner than S₂₃, but the same ice concentration.

S₂₃ = Thinner than S₂₄, but the same ice concentration.

S₂₄ = Thinner than S₂₅, but the same ice concentration.

S₂₅ = Thinner than S₂₆, but the same ice concentration.

S₂₆ = Thinner than S₂₇, but the same ice concentration.

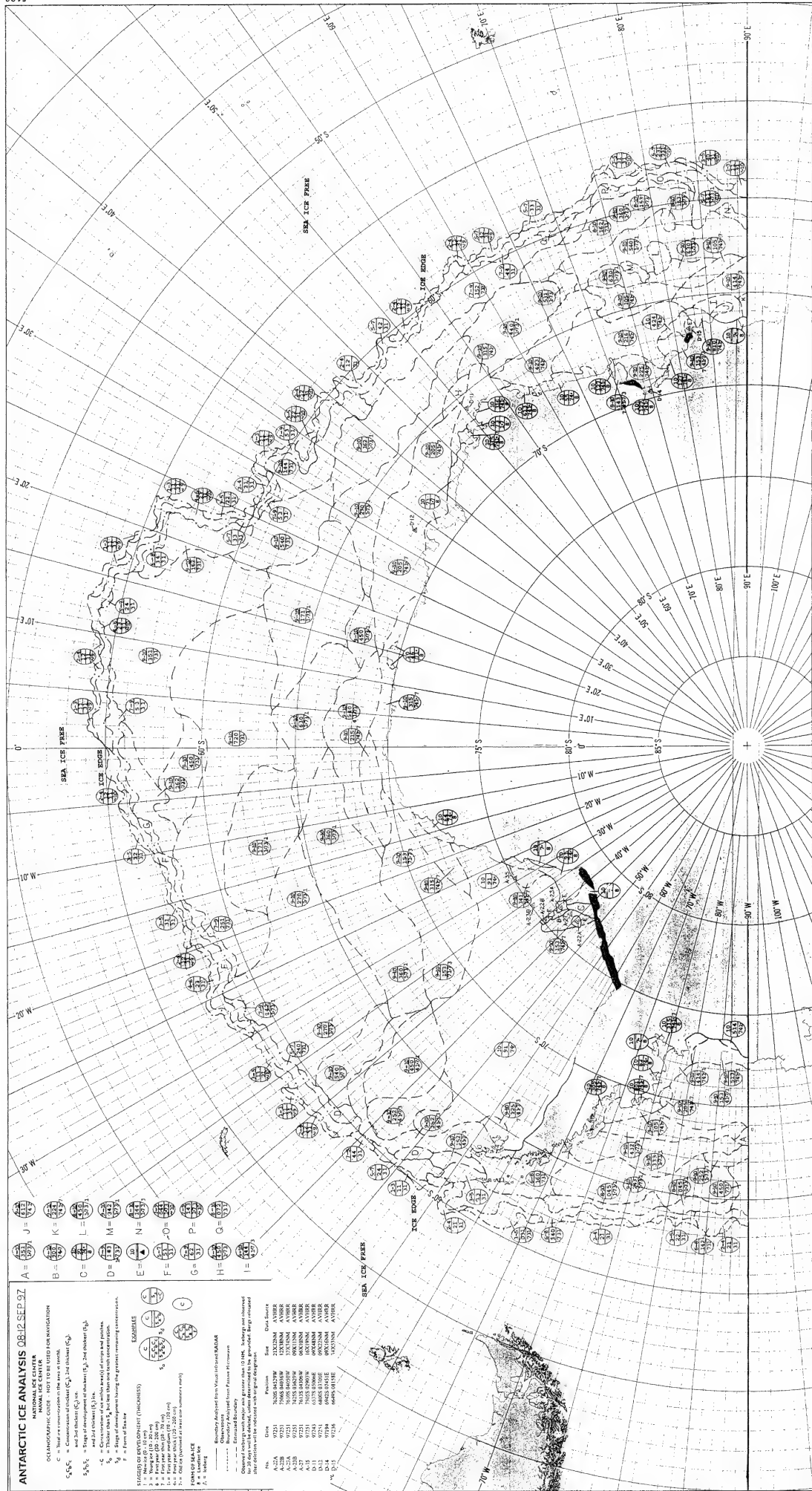
S₂₇ = Thinner than S₂₈, but the same ice concentration.

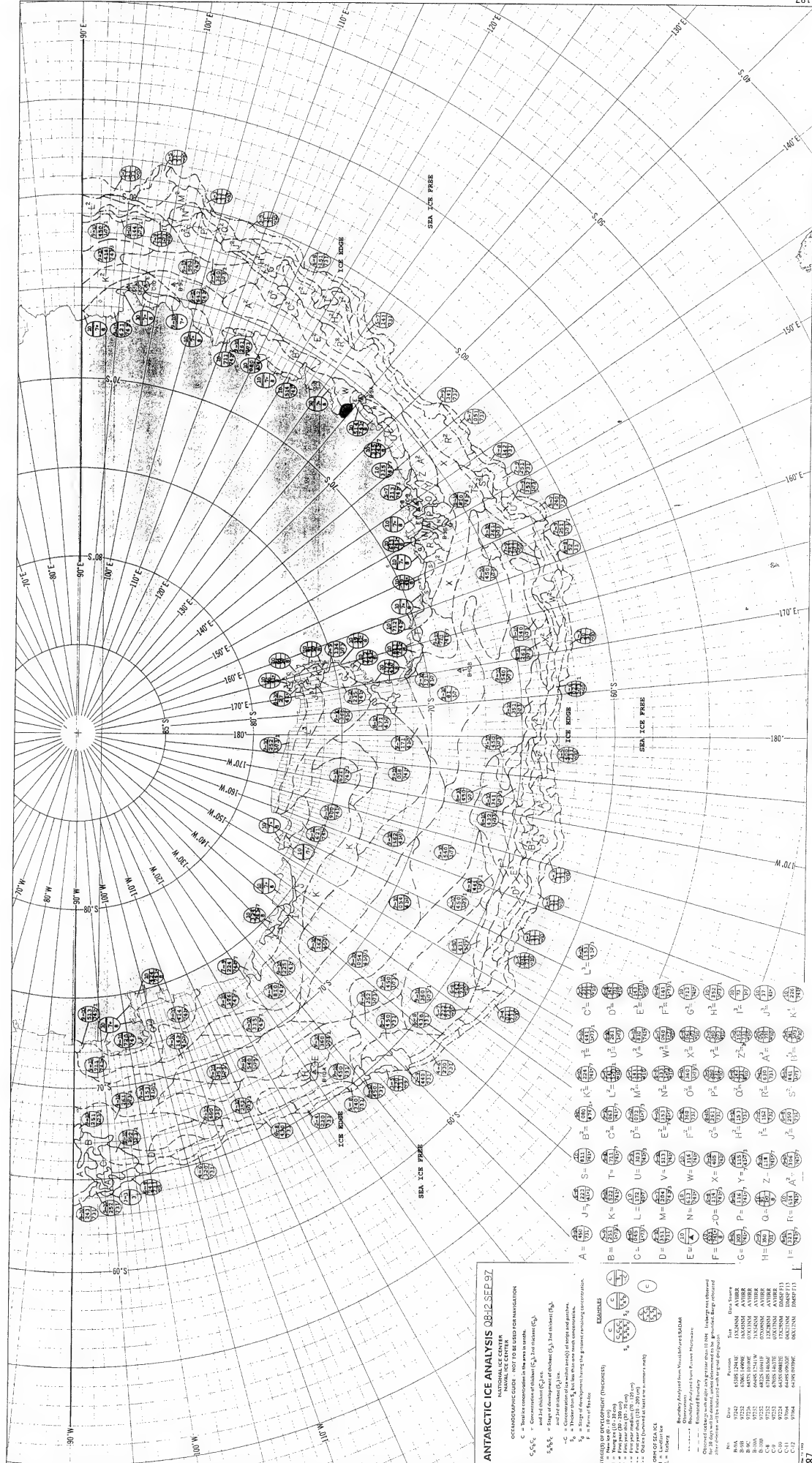
S₂₈ = Thinner than S₂₉, but the same ice concentration.

S₂₉ = Thinner than S₃₀, but the same ice concentration.









ANTARCTIC ICE ANALYSIS 0812 SEP 97

NATIONAL ICE CENTER
OVERSIGHT GUIDE - NOT TO BE USED FOR NAVIGATION

C = Total ice concentration in the area is within
5% of the concentration of the area (C₅) and is within (C₅)

C₅ = 5% of the concentration of the area (C₅) and is within (C₅)

C₅ = 5% of the concentration of the area (C₅) and is within (C₅)

C₅ = 5% of the concentration of the area (C₅) and is within (C₅)

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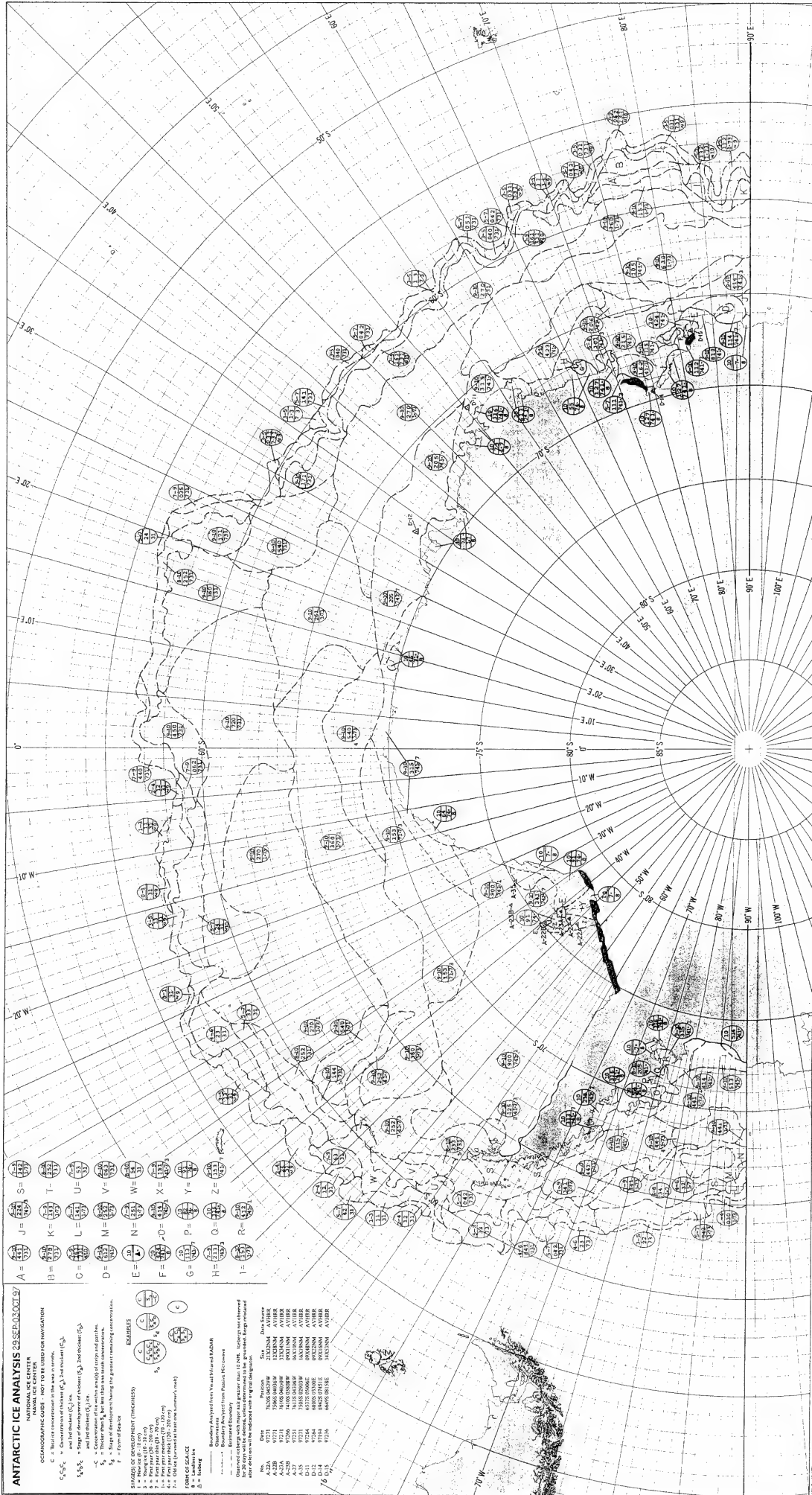
C₅ = 5% of the concentration of the area (C₅) and is within (C₅)

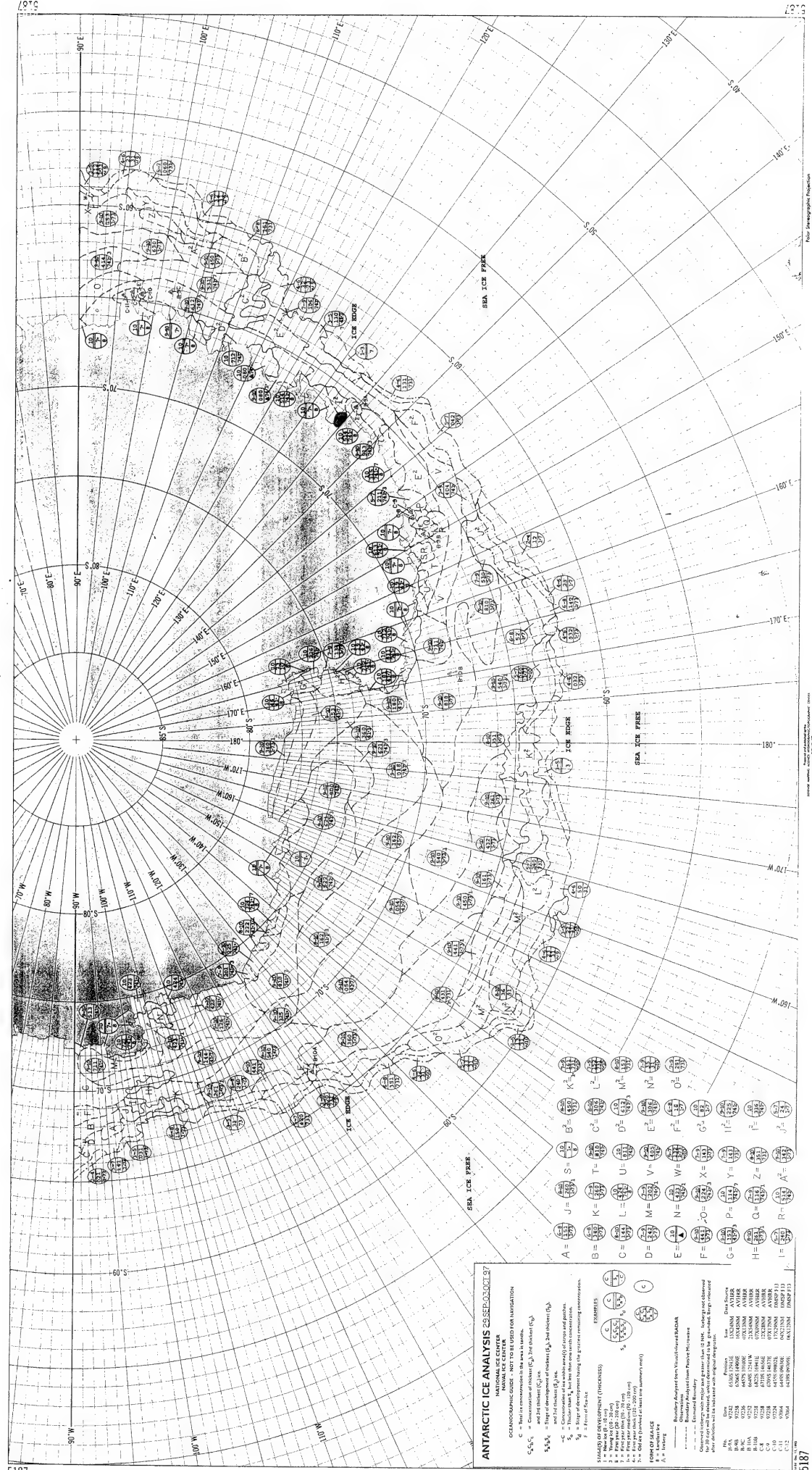
C₅ = 5% of the concentration of the area (C₅) and is within (C₅)

C₅ = 5% of the concentration of the area (C₅) and is within (C₅)

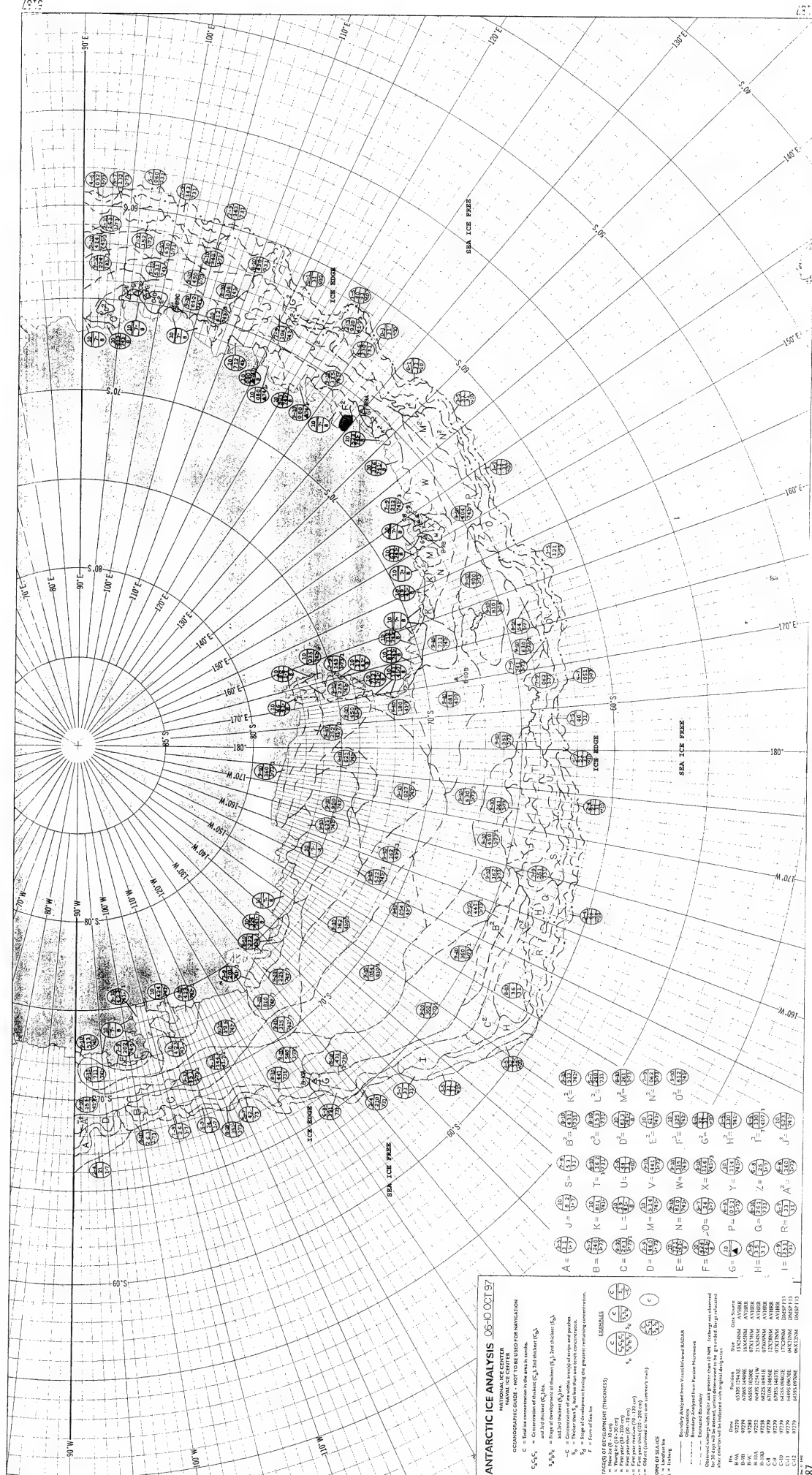
C₅ = 5% of the concentration of the area (C₅) and is within (C₅)

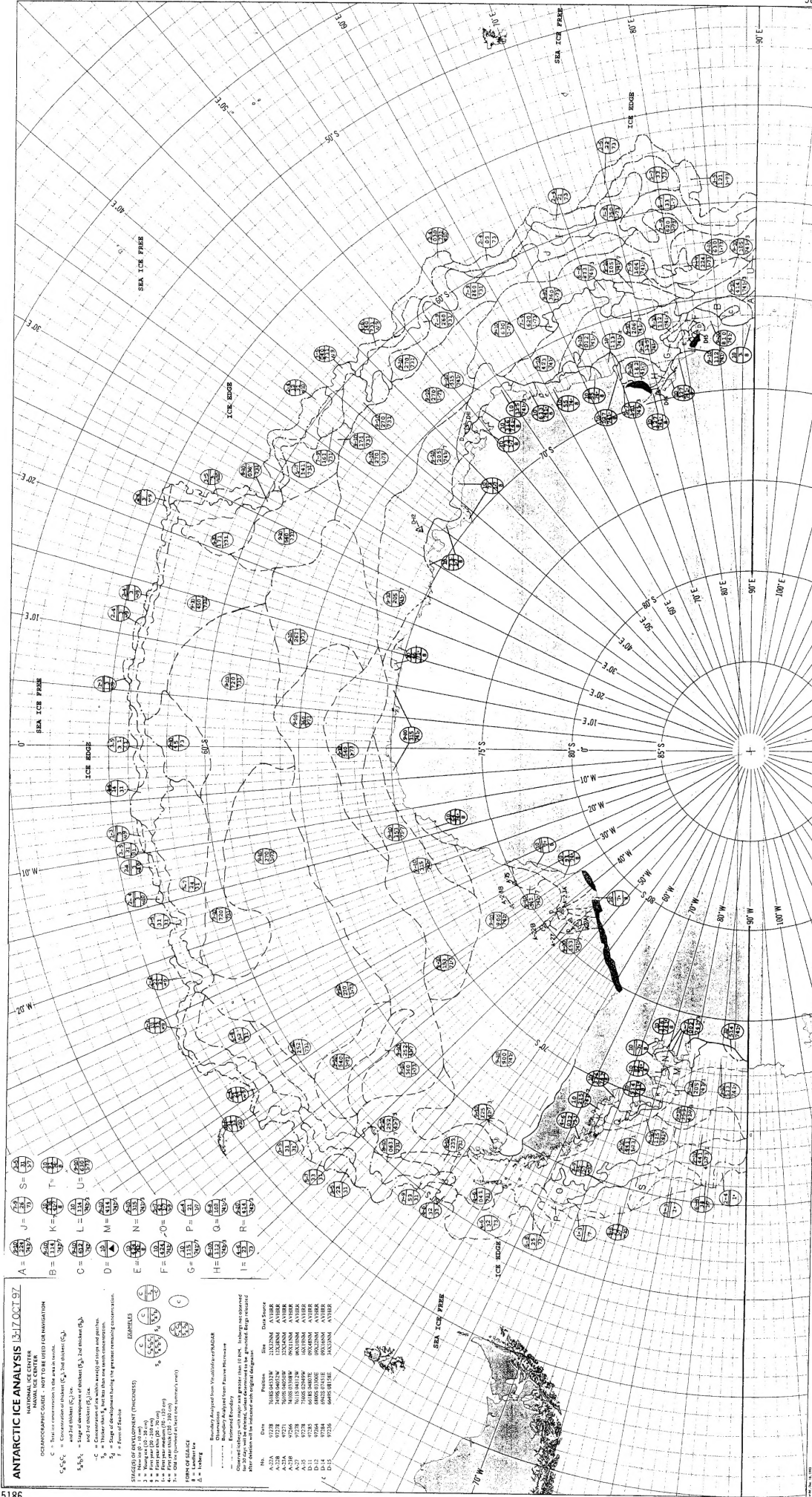












Projection: Polar Stereographic
Scale: 1:10,000,000

ANTARCTIC ICE ANALYSIS 13-17 OCT 97

NAVY ICE CENTER

SYMBOLS:

- C_1, C_2, C_3 = Concentration of icebergs (C₁ and C₂ are 100% and 300% respectively)
- C_4, C_5 = Large or densest of icebergs (C₄ and C₅ are 100% and 300% respectively)
- C_6 = Concentration of ice within area of 1000 sq km
- C_7 = Thickness of ice, less than one inch
- C_8 = Thickness of ice, more than one inch
- C_9 = Thickness of ice, more than one inch
- C_{10} = Thickness of ice, more than one inch
- C_{11} = Thickness of ice, more than one inch
- C_{12} = Thickness of ice, more than one inch
- C_{13} = Thickness of ice, more than one inch
- C_{14} = Thickness of ice, more than one inch
- C_{15} = Thickness of ice, more than one inch
- C_{16} = Thickness of ice, more than one inch
- C_{17} = Thickness of ice, more than one inch
- C_{18} = Thickness of ice, more than one inch
- C_{19} = Thickness of ice, more than one inch
- C_{20} = Thickness of ice, more than one inch
- C_{21} = Thickness of ice, more than one inch
- C_{22} = Thickness of ice, more than one inch
- C_{23} = Thickness of ice, more than one inch
- C_{24} = Thickness of ice, more than one inch
- C_{25} = Thickness of ice, more than one inch
- C_{26} = Thickness of ice, more than one inch
- C_{27} = Thickness of ice, more than one inch
- C_{28} = Thickness of ice, more than one inch
- C_{29} = Thickness of ice, more than one inch
- C_{30} = Thickness of ice, more than one inch
- C_{31} = Thickness of ice, more than one inch
- C_{32} = Thickness of ice, more than one inch
- C_{33} = Thickness of ice, more than one inch
- C_{34} = Thickness of ice, more than one inch
- C_{35} = Thickness of ice, more than one inch
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- C_{98} = Thickness of ice, more than one inch
- C_{99} = Thickness of ice, more than one inch
- C_{100} = Thickness of ice, more than one inch

STAGES OF DEVELOPMENT (THICKNESS):

- 1 = New ice (0-100 mm)
- 2 = Young ice (100-200 mm)
- 3 = First year ice (200-400 mm)
- 4 = Second year ice (400-600 mm)
- 5 = Old ice (600-800 mm)
- 6 = Very old ice (800-1000 mm)
- 7 = Icebergs (more than 1000 mm)

FORM OF ICE:

- A = Iceberg
- B = Iceberg
- C = Iceberg
- D = Iceberg
- E = Iceberg
- F = Iceberg
- G = Iceberg
- H = Iceberg
- I = Iceberg
- J = Iceberg
- K = Iceberg
- L = Iceberg
- M = Iceberg
- N = Iceberg
- O = Iceberg
- P = Iceberg
- Q = Iceberg
- R = Iceberg
- S = Iceberg
- T = Iceberg
- U = Iceberg
- V = Iceberg
- W = Iceberg
- X = Iceberg
- Y = Iceberg
- Z = Iceberg

DATA SOURCE:

No.	Date	Position	Size	Data Source
A-1234	10/15/97	60°S 150°W	1000 sq km	NAVY ICE CENTER
A-1235	10/16/97	60°S 150°W	1000 sq km	NAVY ICE CENTER
A-1236	10/17/97	60°S 150°W	1000 sq km	NAVY ICE CENTER
A-1237	10/18/97	60°S 150°W	1000 sq km	NAVY ICE CENTER
A-1238	10/19/97	60°S 150°W	1000 sq km	NAVY ICE CENTER
A-1239	10/20/97	60°S 150°W	1000 sq km	NAVY ICE CENTER
A-1240	10/21/97	60°S 150°W	1000 sq km	NAVY ICE CENTER
A-1241	10/22/97	60°S 150°W	1000 sq km	NAVY ICE CENTER
A-1242	10/23/97	60°S 150°W	1000 sq km	NAVY ICE CENTER
A-1243	10/24/97	60°S 150°W	1000 sq km	NAVY ICE CENTER
A-1244	10/25/97	60°S 150°W	1000 sq km	NAVY ICE CENTER
A-1245	10/26/97	60°S 150°W	1000 sq km	NAVY ICE CENTER
A-1246	10/27/97	60°S 150°W	1000 sq km	NAVY ICE CENTER
A-1247	10/28/97	60°S 150°W	1000 sq km	NAVY ICE CENTER
A-1248	10/29/97	60°S 150°W	1000 sq km	NAVY ICE CENTER
A-1249	10/30/97	60°S 150°W	1000 sq km	NAVY ICE CENTER
A-1250	10/31/97	60°S 150°W	1000 sq km	NAVY ICE CENTER

